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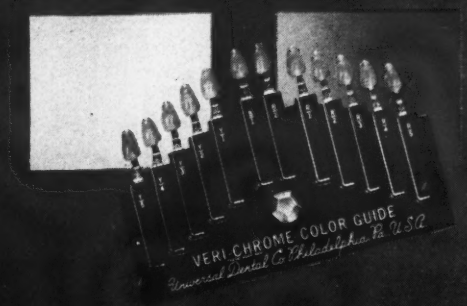
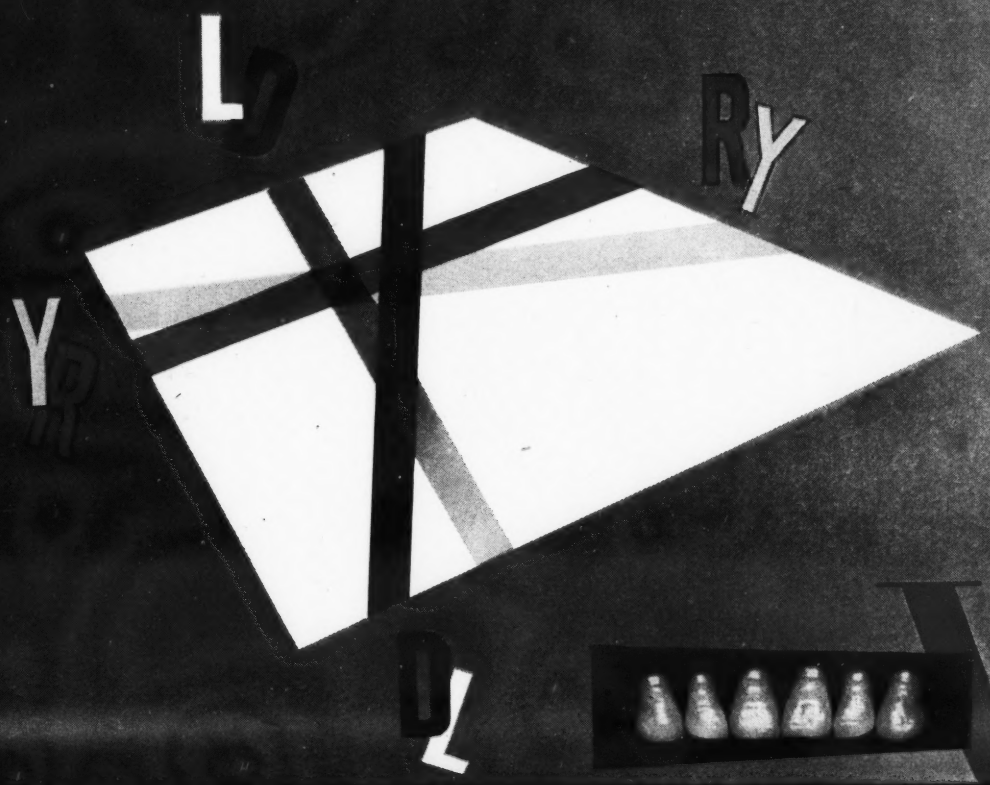


USE THE **YELLOW** TO SEE THE RED

USE THE RED TO SEE THE **YELLOW**

USE THE **LIGHT** TO SEE THE DARK

USE THE DARK TO SEE THE **LIGHT**



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THE DENTAL Digest

VOL. 52 NO. 8

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About Our CONTRIBUTORS

ARTHUR S. HAYNEN, D.D.S. (McGill University, Faculty of Dentistry, 1938) gave a case report in our March issue on the use of circumferential wire in the repair of a mandibular fracture. JOHN H. SHELDON, M.D., F.A.C.S. (Fordham University, 1920), who is engaged in general surgery, is co-author with Doctor Haynen this month of the TREATMENT OF FIBROUS ANKYLOSIS BY CONDYLE REMOVAL.

MORTIMER C. DAVIS, D.D.S. (New York College of Dentistry, 1940) a general practitioner, presents in this issue a comprehensive outline on the proper uses and techniques for acrylic resins.

PERRY R. SKINNER, D.D.S. (Philadelphia Dental College, 1899) practices orthodontics and general dentistry. ROBERT A. ROBINSON, D.D.S. (The Thomas W. Evans Dental Institute, University of Pennsylvania, 1917) is an oral surgeon whose writings have appeared previously in the dental literature. Doctors Skinner and Robinson report here their experiments with INTRAOSSEOUS METAL IMPLANTS FOR DENTURE STABILIZATION.

S. W. BROWN, D.D.S. (Ohio State University, College of Dentistry, 1909) has conducted extensive clinics on occlusal adjusting. In the current issue he brings to readers of the DIGEST a discussion of DISHARMONY BETWEEN CENTRIC RELATION AND CENTRIC OCCLUSION AS A FACTOR IN PRODUCING IMPROPER TOOTH WEAR AND TRAUMA.

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Treatment of Fibrous Ankylosis by Condyle Removal

ARTHUR S. HAYNEN, D.D.S. and JOHN H. SHELDON, M.D., Glens Falls, New York

An operative procedure is described here by a dentist and a surgeon. It is an achievement in oral surgery which has corrected a disfiguring and crippling injury of five years' standing.

A BOY, 15 years of age, was referred to us because of inability to open his mouth completely for about five years.

History

He had been struck by an automobile in 1941, sustaining a fractured femur and multiple face and body lacerations. Past medical history revealed only the usual childhood diseases. Approximately six months after the injury, the area around the right condyle seemed to "click" upon an attempt to open the mouth and an inability to open the mouth fully was noticed.

Examination

The patient was a moderately well-developed adolescent boy. Right and left lateral, profile and anteroposterior views revealed that the right condyle failed to leave the glenoid fossa in the open mouth position (Fig. 1). Intra-oral examination did not reveal any fibrous bands but the bicuspids and molars were carious due to lack of dental care resulting from the patient's inability to open his mouth fully.

Diagnosis

A working or preoperative diagnosis of intra-articular fibrous ankylosis of the right condyle was made and an open operation decided upon. The parents consented to the operation and the patient entered the hospital.

Operative Technique

1. Nembutal 1.5 grains was given the evening before operation and ¾ grain one-half hour prior to entering the operating room.

2. The ear on the right side was packed with cotton, the hair shaved on that side, and the skin prepared with iodine and decolorized with alcohol.

3. Under intra-pharyngeal ether, the question mark type of incision recommended by Blair was made over the right condyle (Fig. 2).

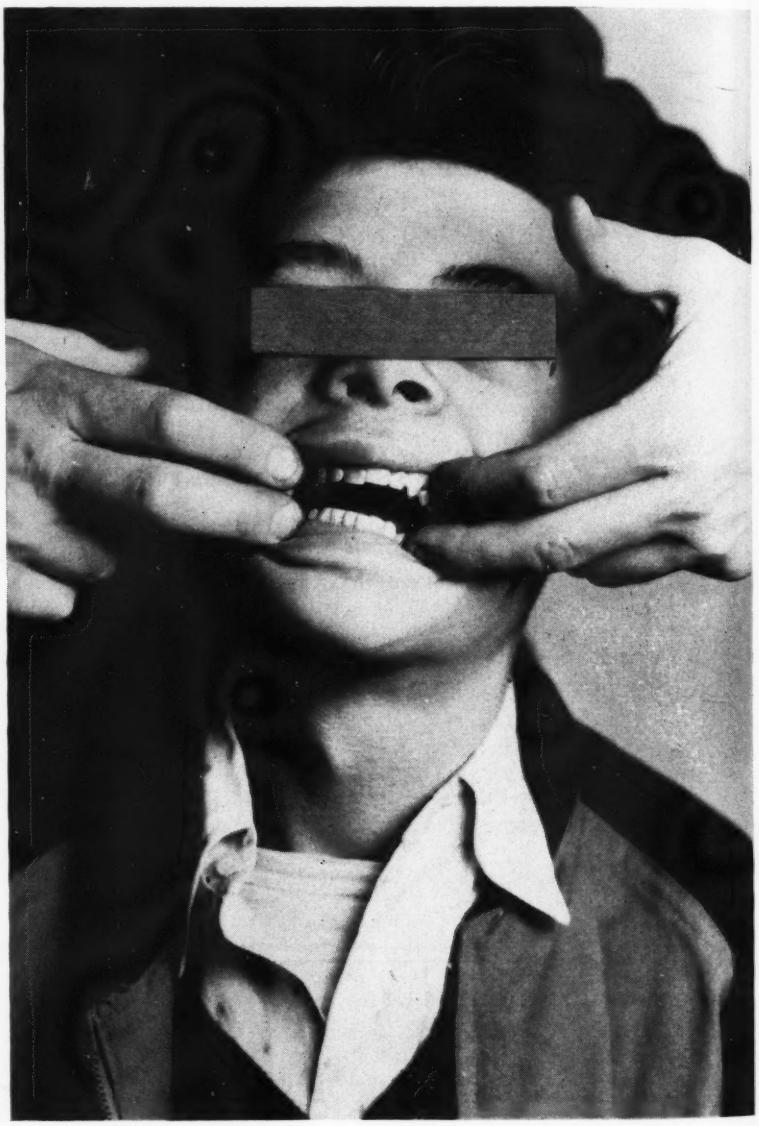

Fig. 1—Maximum extent of mouth opening six months after injury.

4. The skin and the superficial and deep fascia were retracted and bleeding vessels ligated.

5. The head and neck of the condyle were exposed. Upon the anesthetist's attempt to open the patient's mouth, it was seen that fibrous adhesions prevented the condyle from making a normal excursion forward and downward on the meniscus. It was decided, at this time, not only to section the neck of the condyle but to remove the condylar head as well. A large callus formation at the condylar neck gave evidence that an old fracture had healed in this region.

6. A ligature carrier was passed under the neck of the condyle, care being taken to avoid the internal maxillary artery, and a Gigli saw pulled through. The neck of the condyle was sectioned by means of the saw. The external pterygoid muscle was cut at its origin and the condyle removed by means of scissors and blunt dissection. The anesthetist again attempted to open the patient's mouth and more freedom of movement was evident.

7. The wound was cleaned and a flap of temporal fascia sutured to the meniscus. It was intended that this flap of fascia should prevent any union between the remainder of the condylar neck and the bony structures of the glenoid fossa and thus prevent any recurrence.

8. The skin incision was then closed with fine dermal sutures of the mattress type and a rubber dam drain of the Penrose type inserted to allow for drainage.

9. The wound surface was dusted with sulfanilamide powder and a dry sterile dressing placed over the incision.

The patient was seen the following day and was able to open the mouth from 10 to 12 millimeters but experienced pain upon attempting to open further.

Postoperative Treatment and Recommendations

The dressings were changed daily and the drainage tube removed on the fourth postoperative day. The patient complained of some pain for 2 or 3 days upon attempting to open

Fig. 2—Postoperative scar left by question mark type of incision.

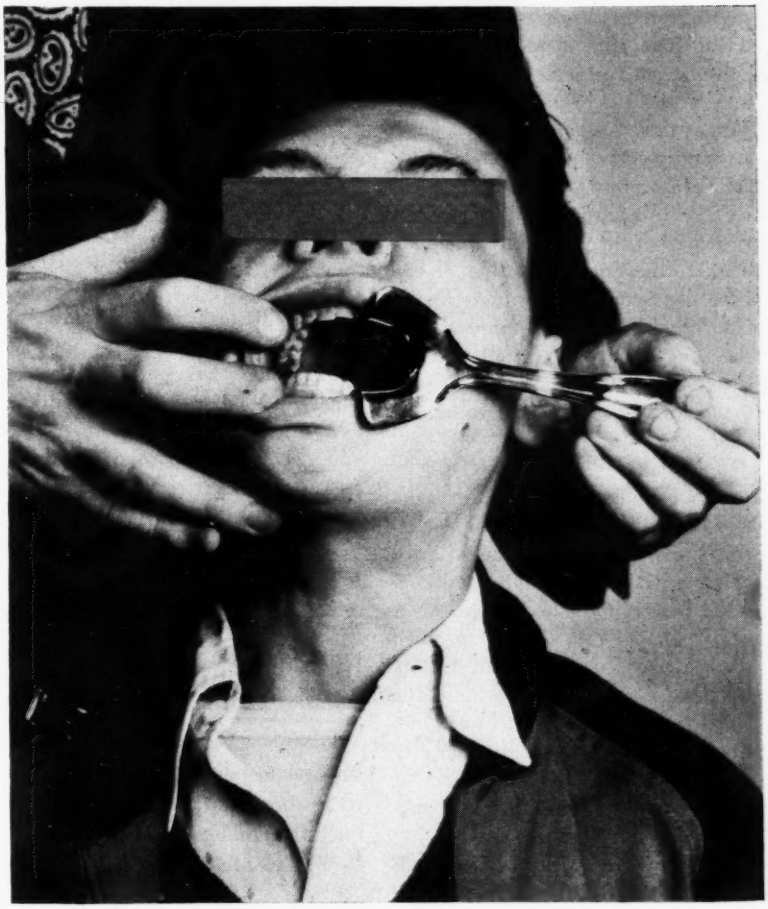

Fig. 3—Extent of mouth opening three weeks after operation.

but this symptom disappeared; also, a slight area of paresthesia developed on the right cheek. This was in all probability due to the injury of a small sensory branch of the transverse facial nerve in this area and should gradually improve with the regeneration of the nerve. By the eighth or tenth postoperative day the patient could open wide enough to have the posterior teeth treated. An opening of 28 millimeters was possible at this time.

It was recommended that the patient try a series of gum-chewing exercises with from two to four sticks of gum in order to exercise the masticatory muscles. At the present time a spring-clip clothes pin is also used to assist in the opening.

The scar is gradually fading and the hair line is again covering the incision. Figure 3 shows the extent of opening three weeks after the operation.

Conclusion

The operation was a success not only from the patient's physical but from his mental point of view as well. Prior to the operation, he was developing introvertive tendencies due to sensitivity about his condition; his failure to talk and eat in public places bore out this fact. Modern oral surgery corrected the existing abnormality and achieved esthetic and functional results gratifying to all concerned.

37 *Bay Street*
Queensbury Hotel

Decalcification of Teeth in Cases of Achlorhydria

HELMUT A. ZANDER, D.M.D., D.D.S., M.S.

Case I

M. F. aged 40 years, was referred to Tufts Dental School Clinic for the diagnosis and treatment of a condition affecting his six upper anterior teeth. About nine months previous to consultation the patient had noticed a progressive wear on the lingual surface of these teeth.

History—The patient stated that for the past four years he had suffered from a condition characterized by a deficiency in gastric hydrochloric acid. To remedy the situation, he had been instructed to take dilute hydrochloric acid three times daily. After the practice had been followed for two years, it was discontinued, only to be resumed a year before he was seen at this Clinic.

Examination of Mouth—This revealed a smooth, hard, shiny, and worn lingual surface of the upper incisors and cuspids. The incisal third of the central and lateral incisors consisted only of the labial enamel layer which was so thin that it appeared transparent. The incisal edges were fractured in an irregular fashion. The labial surfaces of all teeth were free from decalcification, abrasion, or erosion defects. The lingual surfaces of all teeth *except the upper six anteriors* were free from defects.

Diagnosis—Abnormal abrasion of the lingual surface of the upper anterior teeth due to hydrochloric acid.

Case II

Mrs. P., aged 55 years, presented herself at Tufts Dental School Clinic for dental restorations.

Examination of Mouth—The patient showed four extremely thin upper incisor teeth. The enamel of the labial surfaces was intact but so thin that it was transparent. The lingual surface of these teeth was devoid of enamel and most of the dentine. In the cingular area a dark brown spot could be seen. This spot represented irregular dentine at the previous site of the pulp chamber. None of her other teeth presented abnormalities.

History—The patient said she had suffered from achlorhydria for the past twenty-four years. As part of the treatment during this time, she had taken dilute hydrochloric acid before meals three times daily.

Diagnosis—Abnormal abrasion of the lingual surface of the upper anterior teeth due to hydrochloric acid.

Comments

Partial achlorhydria is a fairly common condition. The time-honored treatment for the deficiency is dilute hydrochloric acid taken by mouth three times daily before meals. Patients are advised to take the acid through a glass tube which is placed far back in their mouth. Most of these patients protect all the lingual surfaces of their lower teeth and their upper posterior teeth with their tongue. However, they find it impossible to guard the lingual surface of the upper anterior teeth and the result is an unsightly defect. The severity and extent of the defect vary according to the amount of wear on the lingual surface of the anterior teeth. The lesion is always hard, smooth, and shiny, resembling the classical picture of erosion, and is not comparable to the decalcification seen in caries. Since the condition bears a strong resemblance to erosion, it may offer a possible explanation of the mechanism of similar unexplained conditions.

The affected teeth in Cases I and II were restored with porcelain jacket crowns. It should be possible, however, for dentists to construct a simple, removable appliance that would protect the upper anterior teeth during ingestion of hydrochloric acid. Such an appliance would prevent the unsightly defects and ultimate costly restoration of these teeth.

—From *American Journal of Orthodontics and Oral Surgery* 32:184-186 (March) 1946.

Acrylics: Techniques and Uses

MORTIMER C. DAVIS, D.D.S., Jersey City

The major functions that acrylic resins can serve satisfactorily in dentistry are discussed here in detail by Doctor Davis. The techniques which will assure proper results in the use of these materials are also detailed.

As is the case with most new materials, the acrylic resins have come in for their share of extravagant praise and condemnation since their inception several years ago. Enthusiasts immediately seized upon them as a panacea for all sorts of problems, only to find that like most restorative materials they had their limitations, some easily overcome, and some quite serious. Experimental work has shown that acrylics, especially when used in the operative field, leave much to be desired when, for instance, it comes to hardness, edge and crushing strength, and amount of water sorption. Despite shortcomings, however, the material is here to stay, and when used properly can be of inestimable value in the pursuit of good dentistry.

Uses for Acrylics

The following is a list of the more important uses for acrylics:

1. Inlays, jackets, and crowns.
2. Bridge pontics.
3. Repair of Steele's and other types of interchangeable facings.
4. Window for castings of various types.
5. Denture bases.
6. Teeth for denture bases.
7. Relining dentures.
8. Facial and orbital prostheses.

I will discuss in detail the first three, as these constitute the major functions of acrylics in operative dentistry.

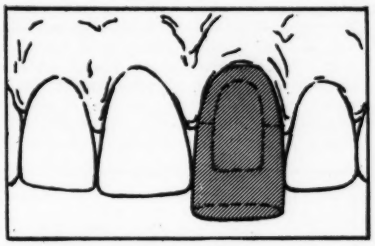

Fig. 1A

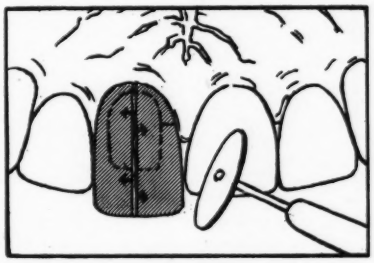

Fig. 1B

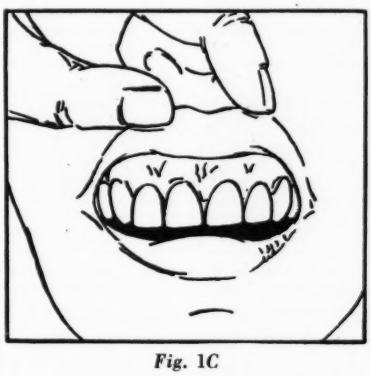

Fig. 1C

Fig. 1—(A) Band contoured and squeezed to fill space. (B) Band slit on lingual with safe-side or lightening disc. (C) Labial view of completed wax-up.

Inlays, Jackets, and Crowns

These three types of restorations, which require a similar technique of handling and processing, will be discussed together, the jacket being used as an example (Fig. 1).

1. Let us assume that the tooth has been properly prepared, with a full shoulder all around and paralleled walls mesially and distally. The jacket may be made from a die of amalgam or stone with or without articulated models, but the direct method is preferable on all but posterior teeth inasmuch as visibility and accessibility are not good in those cases. In anterior teeth, however, a direct pattern can be carved in a short time, and the increase in accuracy of fit over the indirect pattern compensates the operator for the additional chair time spent.

2. The first step is to select a copper band as for a compound impression, contouring so that a snug gingival fit is secured. The band is then squeezed mesiodistally to fill the space and assist in subsequent shaping of the wax pattern (A in Fig. 1).

3. An ivory inlay wax is used; this makes judging of the esthetics somewhat easier than the use of blue wax. The wax is warmed thoroughly and the band is filled and carried to the tooth. It is advisable to let the wax cool to room temperature without the use of cold water. When the wax is hard, the band is removed and the impression examined to see if all details are accurate.

4. If everything is satisfactory, a safe-side or lightning disc is used to cut the band from around the wax (B in Fig. 1). The cut is made gingivo-incisally on the lingual side of the band, care being taken not to nick the shoulder of the impression. If slight damage is done to the shoulder at this point, it is easily corrected during the waxing by passing a warm spatula over the region. The excess is then trimmed off the shoulder with a Bard-Parker blade and the pattern is reintroduced into the mouth.

5. The first step in completing the pattern is to trim the incisal height. Then the proper labial contour should

be worked up by adding or removing wax (C in Fig. 1). After the proper shape and carving of the labial have been completed, attention is paid to the lingual. It is not too important to establish proper occlusion in the wax pattern provided enough room was left in preparing the tooth. It helps in processing to have sufficient thickness on the lingual, and the occlusion is more easily and accurately balanced in the completed restoration. When all margins have been closely verified, the pattern is complete and ready for processing.

Shade Guide—No matter what acrylic material is used it is advisable to construct a shade guide from it. In this way, shades will always be constant and cross interpolating will be eliminated. Many manufacturers suggest the use of one or the other of the excellent porcelain shade guides on the market, but these are usually blended shades and as a result cause some confusion.

1. A simple method for making a shade guide is to cut out small blocks of wax, any number that are convenient to fit into an average-size denture flask. The blocks should be about the width and length of an average permanent central incisor and the thickness of two sheets of baseplate wax (A in Fig. 2).

2. The different shades can then be introduced into each of the spaces left by the blocks after flasking and boiling out. Blended shades can be introduced also by instituting an arbitrary proportion on a combination of the basic shades supplied, care being taken to keep an accurate record of each blend and the proportions used.

3. Numbers corresponding to the numbers of the shades are then typed on small pieces of tissue paper. After the individual acrylic shade is packed into the mold, the number is laid on top of the material. In like manner, after the various molds are filled and their numbers inserted, the flask is closed and processed (B in Fig. 2).

4. On completion of processing, the blocks of acrylic are removed and polished, a hole is drilled through each block, and the entire shade guide may be strung on a piece of wire, thus providing a complete reference for future use.

5. When a shade is selected for a particular case which requires one of the blended shades, the number is looked up in the code, and the proportions of each are readily given.

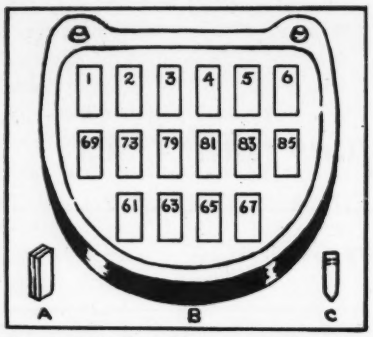

Fig. 2—(A) Two thicknesses of baseplate wax. (B) Double figures denote straight shades, single figures combination shades made up of definite proportions of straight shades. (C) Side view of finished acrylic block showing beveling of incisal edge.

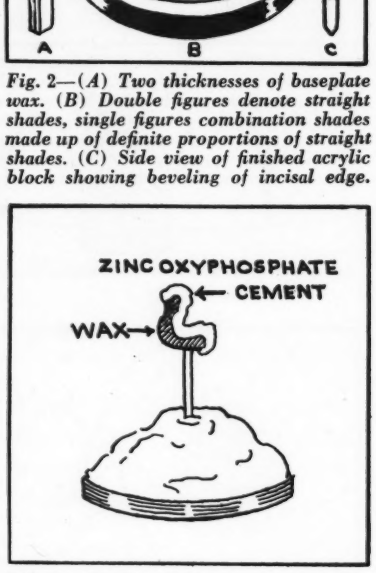

Fig. 3—Investing inlay in zinc oxyphosphate cement, covering all margins with cement.

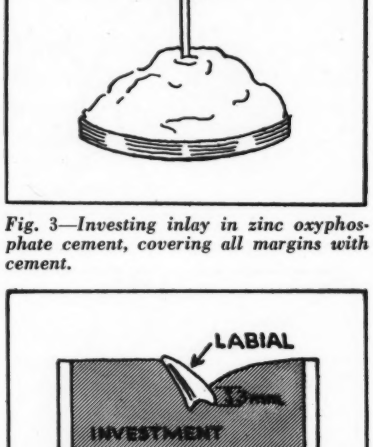

Fig. 4—Angle of investing jacket pattern, investment extending downward 3 mm. on shoulder.

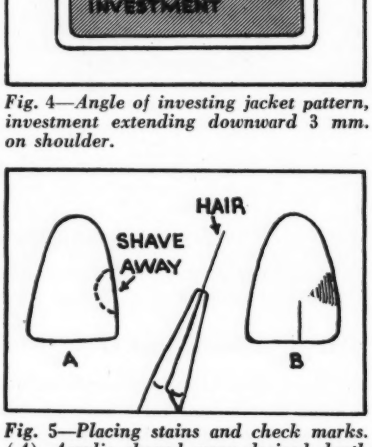

Fig. 5—Placing stains and check marks. (A) Acrylic shaved away desired depth for powdering in stain. (B) Fine hair placed into acrylic surface.

Processing—The waxed-up jacket is now ready for processing.

1. In the case of jackets and crowns, the investment material of choice is either one of the stock investment materials, of which there are many on the market, or a mix of half stone and half plaster, the latter being perfectly satisfactory.

2. For inlays a creamy mix of oxyphosphate cement is preferable. The inlay should be sprued from the mouth, and the cement mixed to set slowly. It is necessary to cover only the preparation side of the pattern and the margins with the cement (Fig. 3). The inlay should be invested face down and the sprue removed after the first half of the flasking is done. Since inlays are small, they invariably take only one shade and thus can be packed lingual side up. Cement is preferable to other investment materials for inlays becsause it does not require a separating medium and breaks away cleanly after processing, leaving the margins exact. With jackets and crowns, the cement would have to be dug out in considerable bulk, and might cause some damage and nicking to the inside or shoulder of the restoration.

3. Continuing with the processing of the jacket, the investment material is introduced into the pattern which is then seated into the filled flask of investment, taking care to have the shoulder covered at all points and striving for a rather acute angle, perhaps 45 degrees, with the incisal up. The investment should extend downward at least 3 millimeters on the labial over the shoulder so that trimming of the processed restoration can be more easily accomplished without grinding off a part of the shoulder (Fig. 4).

4. After the second half of the flasking is done and the flask is opened, the wax is removed. It may be boiled out, or placed in hot water and gently picked out.

5. Separator is then applied and the case is ready for processing. Tin foiling is not necessary. Most of the

commercial houses have suitable ready-made separators.

6. There are two common methods for processing, each being satisfactory. One method is to introduce the powder into a small jar and wet it with the monomer; when the proper consistency is reached, the material is carried into the mold and packed. Another method is to introduce the polymer into the mold directly, wetting it thoroughly two or three times with monomer before the mold is completely filled. A trial closure should be made with either of the two techniques.

a) The second method is perhaps the safer of the two since it assures the operator complete filling of the mold. In the first method, if the space is too narrow for a packing instrument to effectively condense the material, the final result may show an incomplete part.

b) When blending is required, the desired part is trimmed with a sharp knife and the different shade or shades introduced.

c) A word of warning: When using the second method of packing (the polymer directly into the mold) it is necessary to wait until the gloss disappears from the surface of the material and a definite dull, dry appearance becomes apparent before placing cellophane and closing the flask. Otherwise the material will stick to the cellophane upon reopening.

d) After the blending is done, stains, check marks, and restorations may be added to the surface of the acrylic to increase naturalness. A simple method for placing a check mark (Fig. 5) is to place a fine hair, either light or dark depending on the check marks in the other teeth, into the acrylic surface and hold it in correct position by the addition of a little more monomer and polymer. Stains and restorations may be placed by lightly shaving or cutting away the desired area and powdering in the suitable shade of acrylic stain. When the material is wetted by monomer and allowed to set for a moment it can be observed and criticized readily.

7. Processing is done in this manner:

a) The flask and press (an ordinary C clamp from a hardware store makes a satisfactory press) are placed into a pan of water, and the temperature is raised to 160° Fahrenheit for a half hour. The water is maintained at this temperature for one hour, and then raised to boiling and allowed to boil for half an hour.

b) The case is then removed from the boiling water and allowed to bench cool, after which the restoration is removed from the investment, cleaned, and tried on the tooth.

c) Rough polishing is done by mounted stones at low speed. Sandpaper discs are never used as these have a tendency to nick the acrylic. A lightning steel disc may be used safely when needed for otherwise inaccessible carving. Final polishing is done on a high speed lathe with fine pumice on a soft brush, followed by chalk. Cementation is best accomplished with silicate cement of corresponding shade.

Bridge Pontics

Pontics With Reinforcing Devices—Probably the greatest dread of the practitioner is to have a pontic break and have no suitable method for reparing it without removing the bridge. For this reason, when an acrylic pontic is made with a bar of gold running through it to strengthen it, great care should be exercised to reduce lateral stresses and strains on it so that fracture of the acrylic will not occur. Acrylic is unique in its ability to adhere to gold, and there are many specially prepared gold bar materials on the market, but cases have been known to fracture. It would be wise to take the following precautions when using this type of pontic:

1. Make sure the bar is centered as nearly as possible through the pontic.
2. Check the occlusion carefully.
3. Have sufficient bulk of acrylic.
4. Place the bar so that it will not be visible through the acrylic.

If the operator so desires, he may cast his own retentive bar, shaping it as he desires. Several variations in design, such as T bars and cross bars, can be used. A rather efficient method is to cast a saddle area with a post for each pontic as for a tube tooth. This gives the added advantage of repair of the individual unit, in case of breakage, without removal of the bridge.

Pontics Without Reinforcing Devices—These are recommended only for anterior bridges with one or two pontics, and the abutment teeth should be jacketed. The pontics are waxed separately, the jackets waxed separately, and the assembling done in the mouth. The entire bulk of wax is then processed into one piece of acrylic and cemented in place as a unit. If the occlusion allows for a good thickness of material throughout, these restorations will be successful.

In making acrylic pontics of either type, it is a good practice to use double abutments. The cantilever type of bridge should never be used when making an acrylic bridge because of the increased danger of breakage.

Repair of Steele's and Other Interchangeable Facings

Results in these cases are highly favorable. A snug fit on these repairs is attained easily because there is only little dimensional change in processing a wax pattern into acrylic. The following method for repairing a fractured Steele's facing will give good results:

1. Fill a sectional impression tray with warm, soft compound, and seat on the backing and adjacent teeth.
2. While the compound is still warm remove the tray and reinsert several times to remove undercuts from the compound, making sure that the occlusal or incisal edges are clearly defined.
3. Chill the compound and trim away inside to a depth of 2 to 3 millimeters except on the occlusal surface. This will act as a tray for the final impression.
4. Mix a small quantity of alginate impression material, swab the surface of the compound with chloroform, and apply alginate to the compound. Carefully seat the tray in the mouth.
5. When set, remove the impression from the mouth, place a fine pin or a paper clip in the slot of the impression of the broken facing, and pour a hard stone model.

6. Wax up the facing. (It is not necessary to use a lubricant on this facing inasmuch as the pattern is not removed.)

7. Cut the model down to fit in the flask; mix more soft stone; and invest, pattern side up.

8. Process and polish in the usual manner.

9. The pin is removed from the slot by warming it slightly and gently withdrawing it with pliers. This facilitates the removal of any stone which might be adhering to the inside of the slot.

Windows for Castings

It is oftentimes necessary for esthetic purposes to use acrylic windows in restorations such as cast crowns, angle inlays, three-quarter crowns, and the like. The wax pattern should be made in the usual manner and the window cut out roughly from the wax, with emphasis placed on having sufficient undercuts and sharp angles in the wax to provide for retention of the acrylic. After the casting is made, the retentive angles and undercuts are accentuated by burs and stones and the window waxed in. Investing and processing are carried out in the usual manner. Where there is any possibility of occlusal stress coming to bear on the window, as on the buccal side of lower first molars, these surfaces must have a definite ledge of gold protecting them.

115 *Bentley Avenue.*

Fatigue and Weakness of Allergic Origin

THERON G. RANDOLPH, M.D., CHICAGO

Allergic fatigue or toxemia resulting from chronic food allergy usually begins insidiously in association with uncontrolled allergic headaches and gastro-intestinal or nasal allergy. It may occur in intermittent attacks or it may be present continuously. In the latter case a major problem lies in differentiating the fatigue and weakness from "nervous fatigue" or neurasthenia.

Fatigue Syndrome

The first clear description of the fatigue syndrome is to be credited to Rowe. This syndrome may be described as: "fatigue unrelieved by a formerly adequate or an excessive amount of rest."

1. Tiredness often accompanied by aching, drawing, and soreness of muscles.

2. Inability to concentrate and maintain attention.

3. Loss of previous initiative and ambition.

4. Irritability and "nervousness" sometimes reaching the point of despondency.

These and related symptoms occur at any age.

Diagnosis and Treatment

The foods most commonly incriminated are those eaten most frequently. As skin tests with foods are unreliable indices, specific diagnosis and treatment are based upon the results of individual feeding tests or elimination diets.

A striking feature of these cases, whether they are associated with headaches and nasal or gastro-intestinal allergy or not, is the paucity or absence of physical findings. Most cases remain unrecognized or are diagnosed as psychosomatic disease. Absence of positive physical and laboratory findings, however, does not justify the assumption that tiredness and fatigue are of psychogenic origin.

—From *The Proceedings of The Institute of Medicine of Chicago* 17: 145-146 (April 15) 1946.

Incidence of Leukemia in Radiologists

H. ULRICH

A STATISTICAL study of 35,626 obituary notices in the *Journal of the American Medical Association*, covering the 10-year period from 1935 to 1944, reveals that the incidence of leukemia among 205 physicians listed as radiologists is 3.9 per cent. This is more than eight times greater than the incidence of leukemia (0.44 per cent) among those not listed as radiologists. The marked difference provides substantial evidence that exposure to radiation is a potential cause of leukemia.

—From *New England Journal of Medicine* 235:45-46 (January 10) 1946.

Intraosseous Metal Implants for Denture Stabilization

PERRY R. SKINNER, D.D.S., Amsterdam, N. Y. and ROBERT A. ROBINSON, D.D.S., Albany, N. Y.

This is a report of a method to stabilize all types of dentures by attachment to an intraosseous metal implant.

Seven years ago, one of us (R.A.R.) suggested the use of metal implants in the maxillae for the stabilization of dentures. This idea was inspired by the apparent need for positive stabilization of dentures and the successful use of certain newer metals and alloys in osteosynthesis (internal fixation of bone fragments).

First Experiments

Experiments were first undertaken on patients in 1938. As the work progressed, the design of the implant was modified. Changes were determined by functional results and tissue tolerance to the metal. These early attempts envisioned regeneration of bone to assist retention of the implant.

1. At first the implant (Fig. 1) was introduced into the cancellous bone, with the flanged end on the level of the cortical bone.

2. Later, implants were entirely intraosseous and covered with the previously reflected mucoperiosteal flaps.

After implantation, eight weeks were permitted to elapse before implants were allowed to receive the stress of dentures. (The intraosseous implants, when ready for use, were relocated by previously determined anatomical landmarks.) Roentgenographic examinations showed no evidence of osteogenesis in either case. The possibility of osteoid tissue around the implants could not be dismissed, however, since the implants were firmly in place, with no attending inflammatory reaction or exudates. When stress from dentures was instituted, the implants became slightly loose. It was deduced that pressure resorption and osteolysis were re-

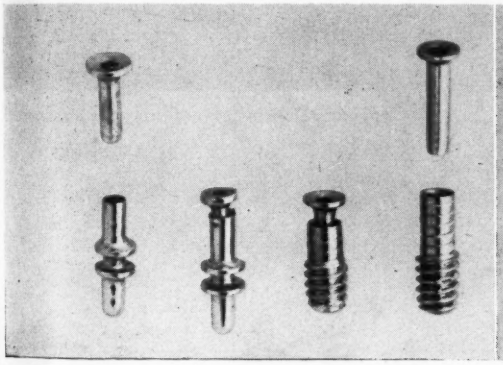

Fig. 1—First type of implant used, now obsolete.

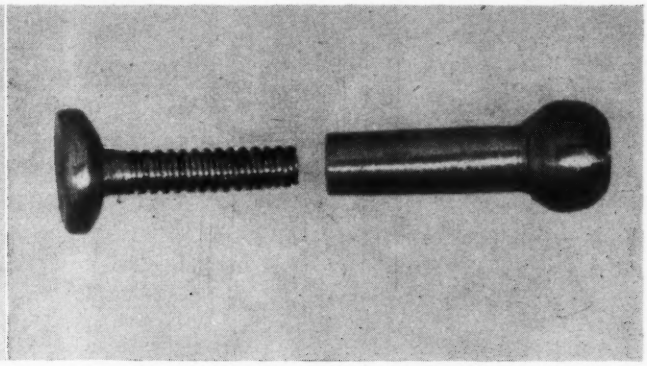

Fig. 2—Type of implant now being used.

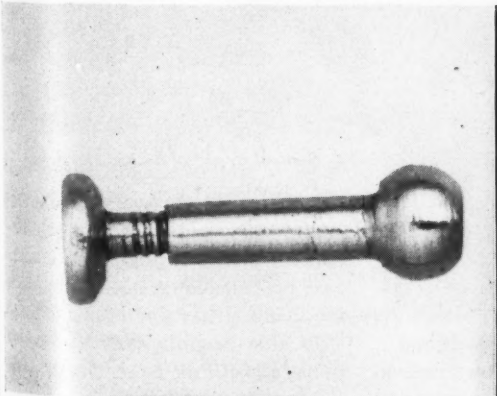

Fig. 3—Implant assembled.

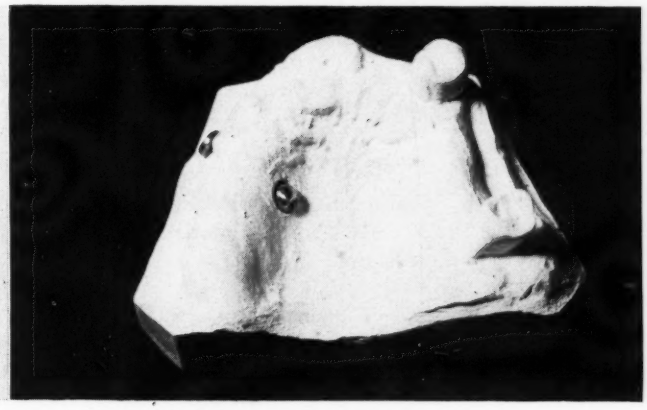

Fig. 4—Implant in channel on model.

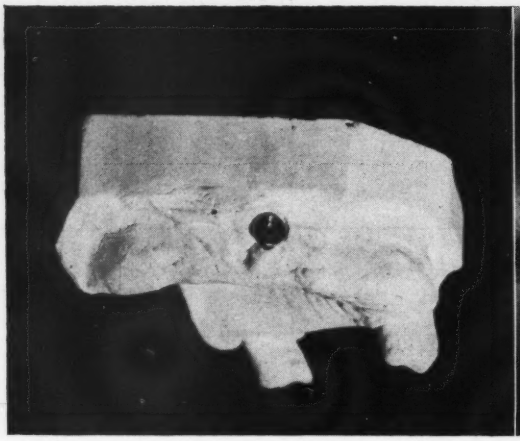

Fig. 5—Buccal aspect.

Fig. 6—Implant on buccal aspect of maxilla; same case as Fig. 4.

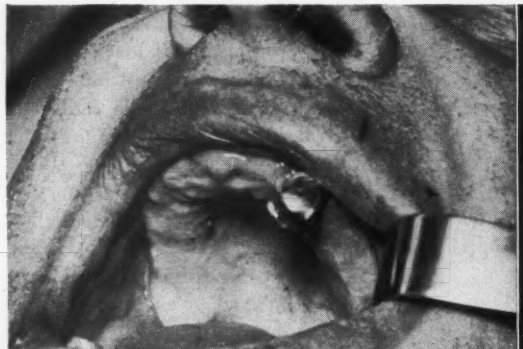

Fig. 7—Palatal aspect.

Fig. 8—Partial upper acrylic denture showing arm of precision attachment.

Fig. 9—Denture in mouth.

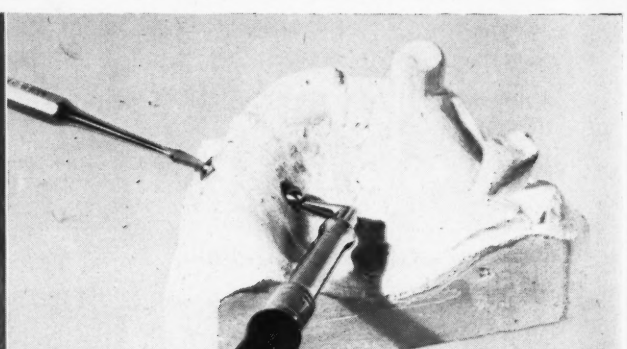

Fig. 10—Implant assembled in channel by aid of holder and driver.

sponsible for the mobility of the metal bodies.

Both the method of introducing implants into the cancellous bone and the method of intraosseous implantation were abandoned.

Present Method

Subsequently, a through-and-through implant was employed (Figs. 2, 3, 4, 5, 6, and 7) with both ends exposed. Its functioning with the denture was supplemented by a precision attachment (Figs. 8 and 9). This is our present approach and it has resulted in a satisfactory method of producing positive denture stabilization, with a good functional result. For the past four years, the implant shown has undergone no change, either in design or principle. The original precision attachment, a part of the denture, has not been modified.

1. After carefully planned surgical preparation of the bone, (R.A.R.) the implant is introduced. The hollow, threaded tube segment is held by an

Ivory right-angle broach holder while the solid threaded segment is seated with a driver made from a straight shank instrument (Figs. 10, 10a).

2. Consideration is given to the factors likely to initiate an osteonecrosis.

3. Roentgenographic study is made to orient the anterior borders of the antra. There should be a minimum clearance anteriorly of one-half centimeter between the maxillary sinus and the location of the bone channel.

4. The ridge is extended surgically if the mucobuccal fold is low.

5. The area is anesthetized; the mucosa is dried; the surface sterilized, and a small spherical mass is excised.

6. The surgical bur is used at slow speed to channel through the bone.

7. Laceration on the palate is avoided by making a small puncture with a pointed knife blade to admit the bur head through the palatal mucosa as the bone channel is being completed.

The channel in the bone becomes covered with a healthy, epithelized soft tissue. Roentgenograms have revealed neither pressure resorption nor osteolysis (Figs. 11 and 12).

Application

The method is applicable to partial, roofless, and full dentures. Designs of implants, prosthetic appliances, and precision instruments for the placement of implants were conceived and constructed (P.R.S.) in practical cases. The metallurgical formula of the implant conforms to the standards of passivity (freedom from electroactivity in the body fluids) which have been established by the Fracture Committee of the American College of Surgeons.

An unusual application of the first type of implant was employed in the following case (Fig. 13):

A male, 60 years of age, a bank officer, developed an uncontrollable habit of lifting his full lower denture with his tongue. He had had several sets of dentures made in seeking relief. When first seen by us, he was wearing dentures which appeared to fulfill every prosthetic requirement. He continued, nevertheless, with the tongue habit.

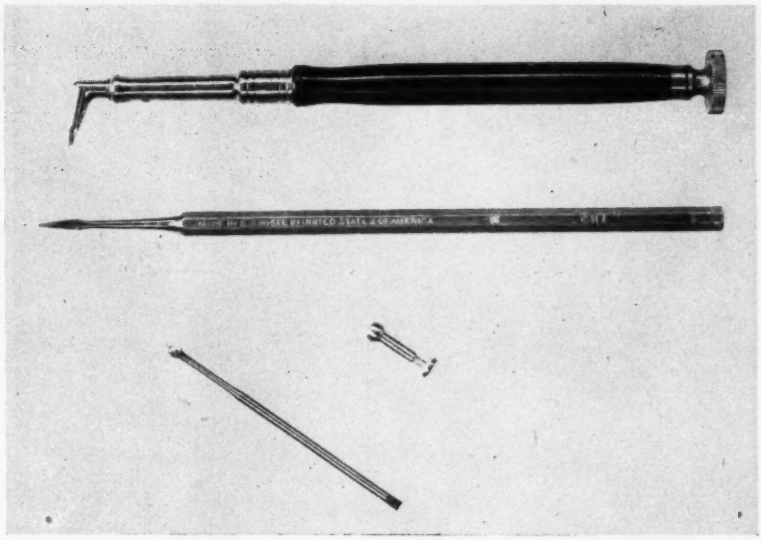

Fig. 10a—Holder, driver, implant, and surgical bur.

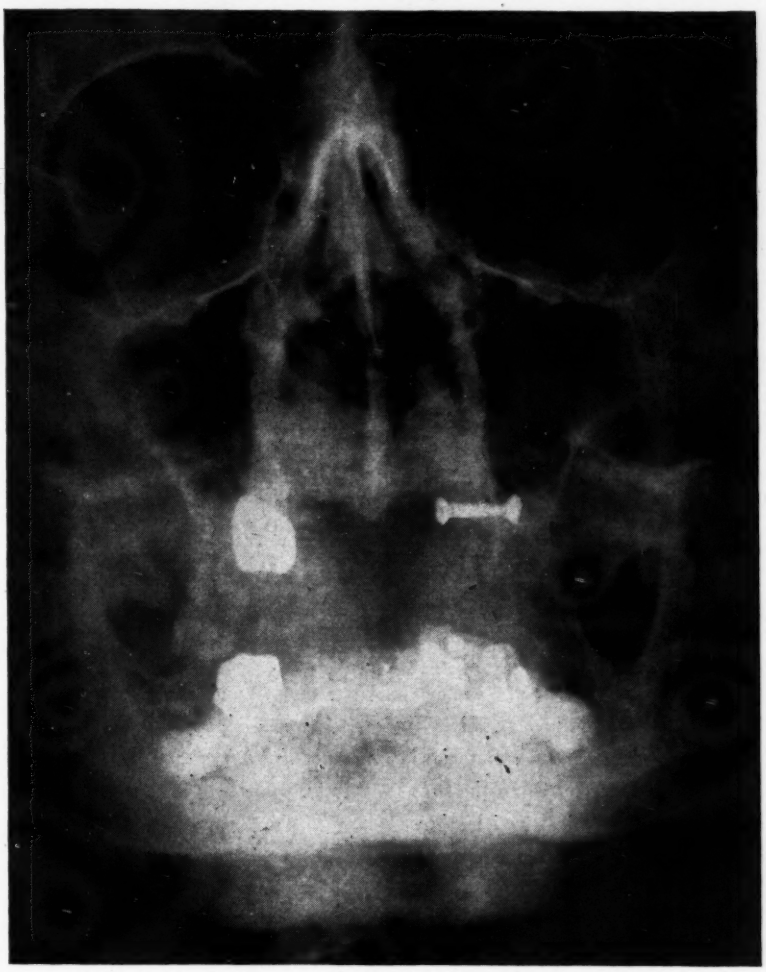

Fig. 11—Implant in right maxilla (See Fig. 2). No evidence of bone disease.

Implants were inserted (obsolete type, Fig. 1) and remained in posi-

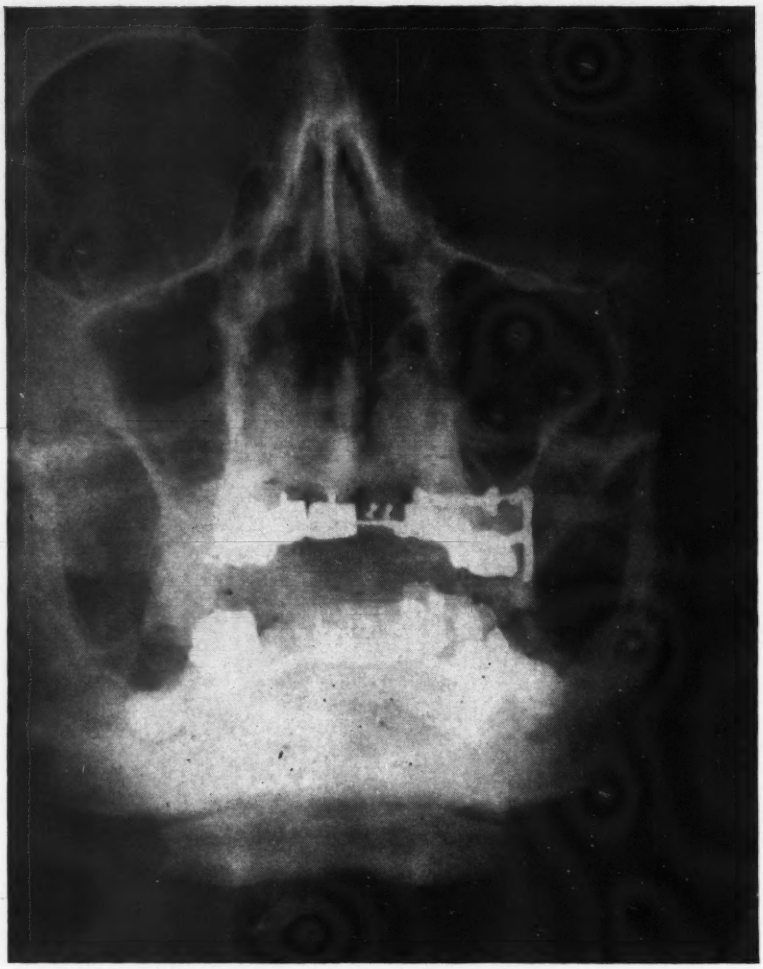

Fig. 12—Note vertical arm (male) of precision attachment fitting into implant. Contiguous opacities are metal parts of denture.

tion for fifteen months during which time this man developed a tolerance to the denture which could not be unseated by tongue manipulation. He is now wearing dentures without the aid of implants. It is deduced that the positive stabilization was conducive to toleration of the denture and elimination of the tongue habit.

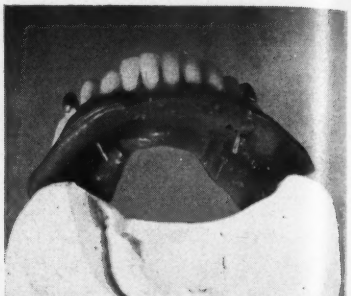

Fig. 13—Implant used as temporary expedient to develop tolerance to denture (case report).

Conclusion

The advantage of this method is that patients with dentures made by the more commonly known methods, who were previously unable to chew their food adequately and comfortably, are now able to do so. The results observed to date are sufficiently promising to warrant a continuation of the work for further evaluation.

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The Editor's Page

AMONG PREGNANT women gingivitis is found in 50 to 60 per cent of cases. Pregnancy gingivitis may vary from slight tissue bleeding to marked tissue proliferation and tumor-like formation. Pain is usually absent and the tissue usually returns to the pre-pregnancy state after parturition.

Pregnancy gingivitis is apparently a change in mucosal tissue that results from altered nutritional and metabolic conditions. In other epithelial surfaces, namely, the vaginal and nasal mucous membranes, changes have been observed during pregnancy.

Ziskin and Nesse[1] believe that all such changes are due to modifications in the estrogenic metabolism. They explain the mechanism as follows:

"1. Estrogen during pregnancy is present in bound, inactive form, so that it may not be available to the gingivae to the expected extent, and hence does not have a proportional effect on the gingivae.

"2. There may be a reduced ability of the oral tissues to utilize available estrogen because of the increased amounts and modifying effect of progesterone.

"3. The large amounts of chorionic gonadotropin may affect the gingivae directly or indirectly.

"4. The increased activity of the thyroid gland and the adrenal cortex may modify the effect of available estrogen on the gingivae.

"5. Nutritional factors may alter the amount of endogenous estrogens available for the gingivae. These factors indicate the probable causes of the gingival alterations reported here."

Hirschfeld states that pregnancy gingivitis "manifests itself through the gums in several ways, namely, marginal gingivitis, hypertrophy of the gums, especially of the interdental papilla, and proliferations from under the gum either interproximally or labiolingually. The condition may be generalized, or especially marked where there is food impaction, traumatic occlusion, lack of function, or any other traumatizing factor. The hypertrophied masses may continue to grow until after parturition when they usually disappear."

In a detailed clinical and microscopic study including a series of biopsies, Ziskin and Nesse describe five classifications of pregnancy gingivitis:

Class I: Bleeding of the gums, markedly worse after conception.

Class II: Slight changes in the interdental papillae with the loss of tissue stippling and the development of a glossy appearance of the papillae. Variation in color from pink to an old-rose hue. Blunting of the tip of the papillae.

Class III: Involvement of the free gum margin alone with the appearance of "raspberry red gums."

Class IVA: Hypertrophy and tumefaction of the interdental papillae. Variation in color from old rose to a deeper, cyanotic hue.

Class IVB: More marked proliferation of the papillae due to an edema and hyperplasia.

Class IVC: Proliferation so severe that tissue may assume the appearance of a pedunculated tumor.

Class IVD: Proliferation of epithelium from the *undersurface* of the free gum margin and a spreading along the gingival crevices. Interdental papillae not involved.

Class IVE: Formation of pseudopapillae.

Class V: Pregnancy tumor. Rapidly growing, pedunculated attachment. Disappearance or diminution in size without treatment after parturition.

[1]Ziskin, D. E. and Nesse, C. J.: Pregnancy Gingivitis: History, Classification, Etiology, Am. J. Orthodont. & Oral Surg. **32**:390-432 (June) 1945.

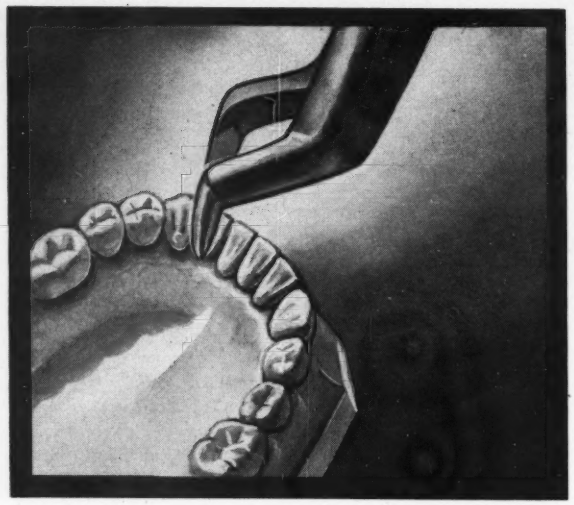

Fig. 1

An Extraction Procedure

Henry L. Desatnek, D.D.S., Brooklyn

Fig. 1—There are occasions when the dentist finds it difficult to extract the lower anterior teeth by using a lower forceps. In such cases, a better procedure is to use an upper root forceps, number 32A, and stand behind the patient to apply the forceps to the anterior lower teeth.

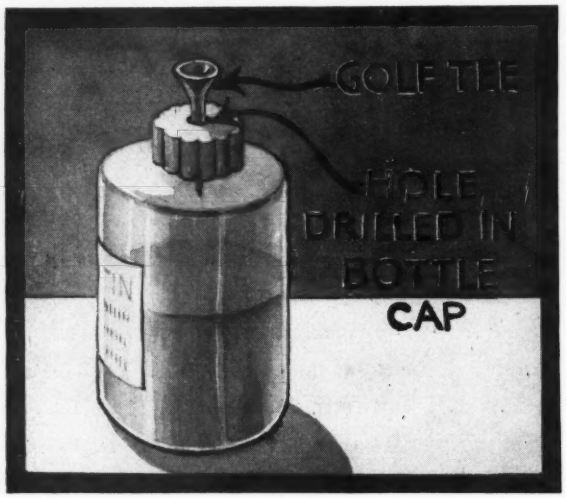

Fig. 2

A Handy Dispensing Bottle

A. Leo Vollmer, D.D.S., St. Marys, Pennsylvania

Fig. 2—A hole is drilled in the bottle cap, and a golf tee is inserted in this hole. Whenever the liquid in the bottle is to be used, the golf tee is speedily removed and held between the fingers. By this method it is unnecessary to unscrew and rescrew the bottle cap each time the contents of the bottle are needed.

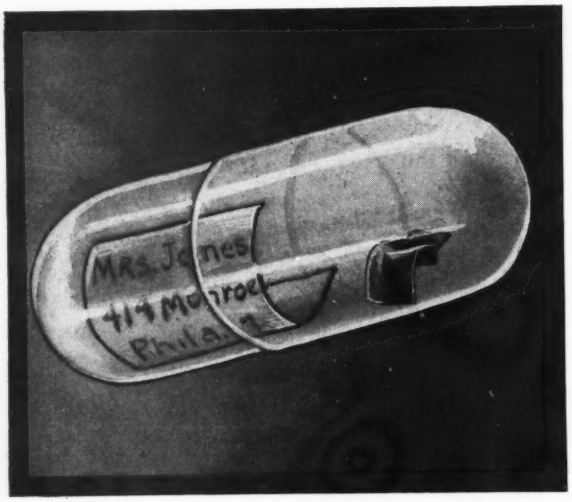

Fig. 3

A Container for Gold Inlays

M. H. Goodinsky, Philadelphia

Fig. 3—After an inlay is cast, if it is placed in a gelatin capsule with a slip of paper carrying the patient's name, it will be quickly identified when the patient presents himself for his next appointment.

Readers are Urged to Collect $10.00

For every practical clinical or laboratory suggestion that is usable, THE DENTAL DIGEST will pay $10.00 on publication.

You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable illustrations; write a brief description of the

A Simplified Method for the Application of Silver Nitrate

Burney Simon, D.D.S., Bremerton, Washington

Fig. 4—The following method is suggested to prevent silver nitrate stains on the hands or on the operating field. An ordinary paper cup is inverted, and a drop of silver nitrate is placed on one side of the bottom of the cup and a drop of eugenol on the other side. A small ball burnisher is dipped in the silver nitrate and applied to the tooth. The silver nitrate is immediately reduced by eugenol which also is carried to place on the small ball burnisher.

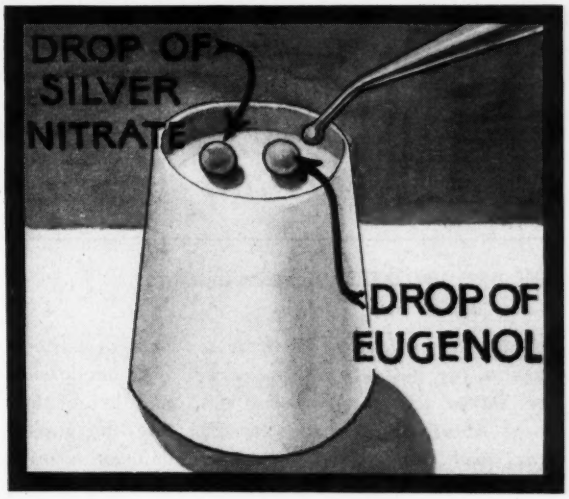

Fig. 4

A Sterilization Procedure

Newman D. Winkler, D.D.S., New York

Fig. 5—A small enameled ladle from which part of the handle is removed is used as a container for sterilizing needles and other small objects quickly. A small amount of water is placed in the ladle, which is then held over the Bunsen flame on the bracket. The water boils almost instantly and sterilization is accomplished quickly and surely.

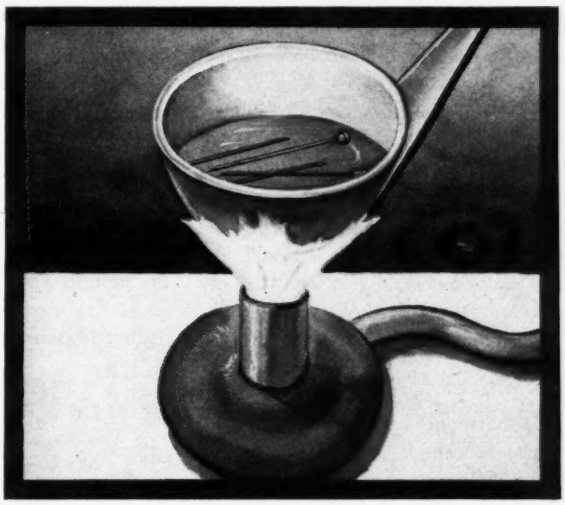

Fig. 5

Correction of Acrylic Jacket Crowns

George W. Hindels, D.D.S., New York

Fig. 6—An acrylic jacket crown that does not fit snugly at the shoulder may be adjusted by the addition of clear acrylic relining material. The reliner is added in a small amount at the gingival margin. The crown is carried to position and the excess material is removed. The patient is dismissed. At the next visit, the hardened acrylic material is trimmed and polished and the crown is cemented in position.

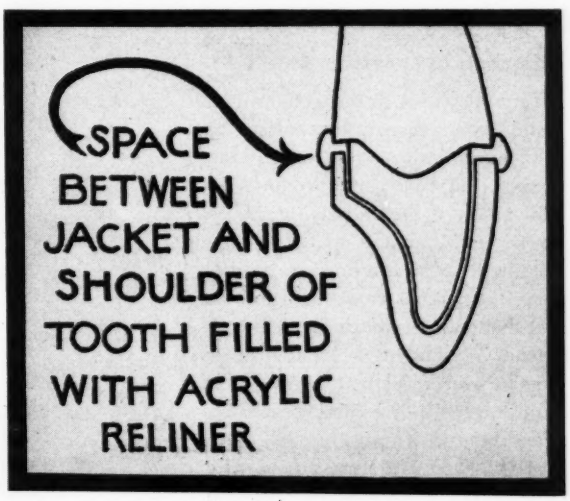

Fig. 6

technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time.

Turn to page 454 for a convenient form to use.

Send your ideas to: Clinical and Laboratory Suggestions Editor, THE DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

Disharmony Between Centric Relation and Centric Occlusion as a Factor in Producing Improper Tooth Wear and Trauma

S. W. BROWN, D.D.S., Ashtabula, Ohio

Selective grinding of teeth is a method for relieving the excessive stress which produces occlusal trauma, improper tooth wear, and the failure of many restorations. Complete directions for the development of the skills involved are elaborated in this text by Doctor Brown. They are a detailed guide to the establishment of ideal harmony between centric relation and centric occlusion in natural dentures.

WE HAVE BEEN taught for many years that full denture construction, in order to be successful, requires the harmonious association of centric occlusion and centric relation. It is my aim here to apply the ideal harmonious association to natural dentures.

Definitions

Disharmony between centric relation and centric occlusion is many times the cause of failure in our restorations.[1] *Centric relation* defines a relationship between the mandible and the skull. *Centric occlusion* is a relationship of the teeth when closed.

Diagnosis of Excessive Stress

Improper wear to the teeth brought about when disharmony exists results in excessive stress which traumatizes the teeth and produces inflammation of the underlying tissues. To recognize that a tooth is being submitted to undue pressure is easy when the patient comes and tells us that the tooth is sore or loose. But we should be able to detect this stress long before the patient complains of pain in a tooth or experiences loss of alveolar bone. To ensure early diagnosis of excessive stress, the dentist must become thoroughly familiar with the color and *general appearance of normal healthy* gum tissue.

Examination of Gum Tissue—The pink hue of the roof of the mouth is the color guide to healthy gums. Inflammation starts when there is continued stress on the teeth which moves them beyond their physiologic limit of tolerance. It may be caused also by the presence of micro-organisms or diet deficiencies. Upon examination of the mouth, a little redness here or there may seem to be of no consequence; but later this inflammation often develops into a disease of the gingivae, the periodontal membrane, or the alveolar bone.

When a patient presents himself for examination, look at the roof of the mouth. This is usually a healthy pink. Examine the gums around the teeth and carefully note the color of all tissues. The color of the gums, from health to disease, may be recorded on a chart. I use "Zero Pink" as the color of perfect health and designate other colors as "No. 1, 2, or 3 Pink."

Diagnostic Signs—A few of the recognized diagnostic signs of trauma are:

1. Traumatic crescents
2. Congestion of marginal gingivae
3. Recession of marginal gingival line
4. Gingival festoons
5. Gingival clefts
6. Absence of stippling
7. Mobility of varying degrees
8. Changes in alveolar bone
9. Enlarged blood vessels
10. Facets on teeth

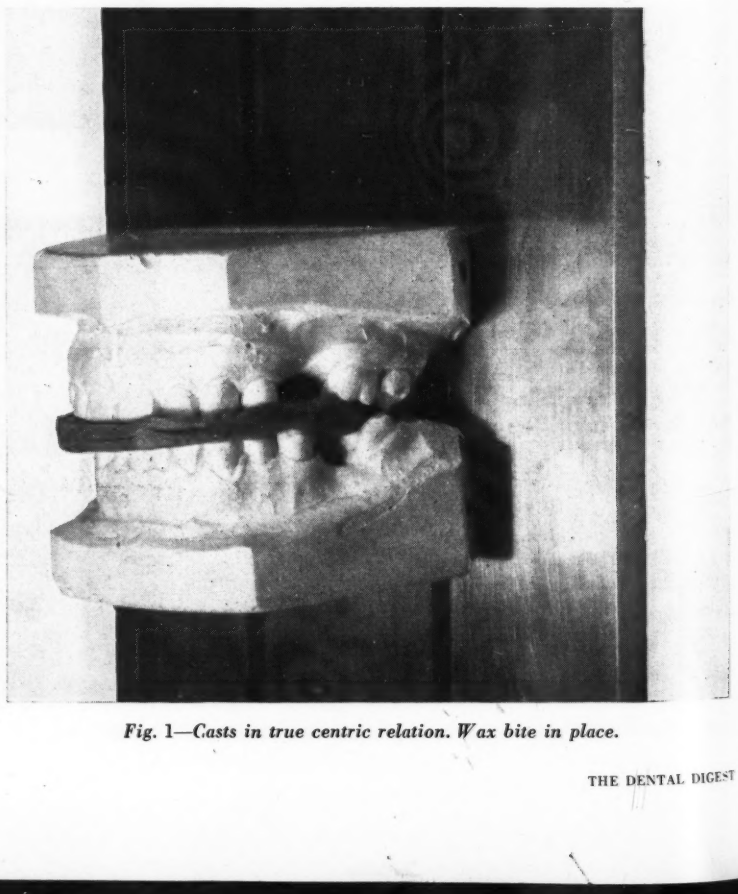

Fig. 1—Casts in true centric relation. Wax bite in place.

Any of these signs indicate excessive strain in some phase of the mandibular movement and a little grinding on one or more tooth planes will often relieve the condition.

Closing Movement of Mandible

During the time the mandible is at rest, there is muscular balance. The closing movement of the mandible from rest position to occlusion is either normal or abnormal.

Normal—The normal closing movement of the mandible from rest position to occlusion is a hinge movement with the fulcrum located in the lower half of the temporomandibular joint.[2] During the act of trituration in the molar region, the condyle should not be pulled forward by the cusps of the teeth when returning to centric occlusion; it should function freely in the glenoid fossa. There should be, in other words, no incline plane interference. Also, there should be a slight freedom of movement of the occluding surfaces of the teeth in centric occlusion when pressure is exerted.

Abnormal—Premature contact of some cusp or incline plane produces a muscular unbalance when the teeth slide from the interference into occlusion. This results in disharmony between centric relation and centric occlusion. Interference of the cusps also prevents the freedom of movement of the occluding surfaces of the teeth which is normal in centric occlusion.

Establishing Harmonious Association in Natural Dentures

Stone casts of both the upper and lower teeth, made from accurate impressions, supply a visual method of studying the occlusion. But deciding where to reshape the teeth without having a centric relation record from the casts is wrong, in my opinion.

The centric relation record is made by using an arch-shaped sheet of Aluwax. In using the Aluwax bite, the centric relation of the mandible and maxilla is registered in rest position. In other words, the closing movement of the mandible is stopped just before there is any cusp interference; the teeth are separated by a space probably the thickness of a piece of thin matrix metal. To be sure that there is no cusp interference, a V-shaped piece is cut out of the Aluwax in the area where premature contact will take place.

This record is completed with the hinge movement of the mandible and with no pressure. Aloxite #120 grit, in a dry state, is placed on the occlusal surfaces of the lower teeth to

A STUDY IN OCCLUSION

I. Diagnosis procedure
  A. Patient's comments
    1. Pain in teeth
    2. Soreness in condyle region
    3. Cracking noise in glenoid fossae
    4. Sensitive interproximal septum
  B. Examination of gums and teeth
    1. Signs of trauma
      a.) Enlarged veins
      b.) Crescents
      c.) Redness
      d.) Other signs
    2. Mobility of teeth
    3. Flat areas on teeth
    4. Soreness and pain
    5. Depth of pockets
  C. Bitewing films
  D. Stone casts and wax check bites
  E. Relation of mandible to maxilla in:
    true centric relation and acquired centric occlusion
    1. Using bite check
    2. Using Aloxite grit No. 120

II. Correction of occlusal trauma
  A. Detection of spots to grind
    1. Carbon paper
    2. Wax (Kerr's green)
    3. Dry foil
    4. Aloxite grit
    5. Typewriter ribbon held in position by hemostat
  B. Rule used in selective grinding (See chart)
    (Do not grind the point of the cusp or the spot it touches in centric occlusion.)
  C. Selective grinding
    1. Occluding the mandible to the maxilla with zero pressure in:
      a.) Centric relation
      b.) Centric occlusion
      c.) Right and left lateral occlusion
      d.) Protrusive occlusion
    2. Reshaping incline planes of the teeth
    3. Kind of stones used (inverted cane type)
    4. Where to grind and where not to grind
    5. Freedom in centric occlusion
    6. Balance excentric occlusion with as many teeth as possible

NOTE: In many cases it is not possible to balance the articulation of all natural teeth, but it is possible to establish a centric occlusion, in harmony with centric relation and also to free centric occlusion. Artificial dentures can be balanced and also given freedom in centric occlusion.

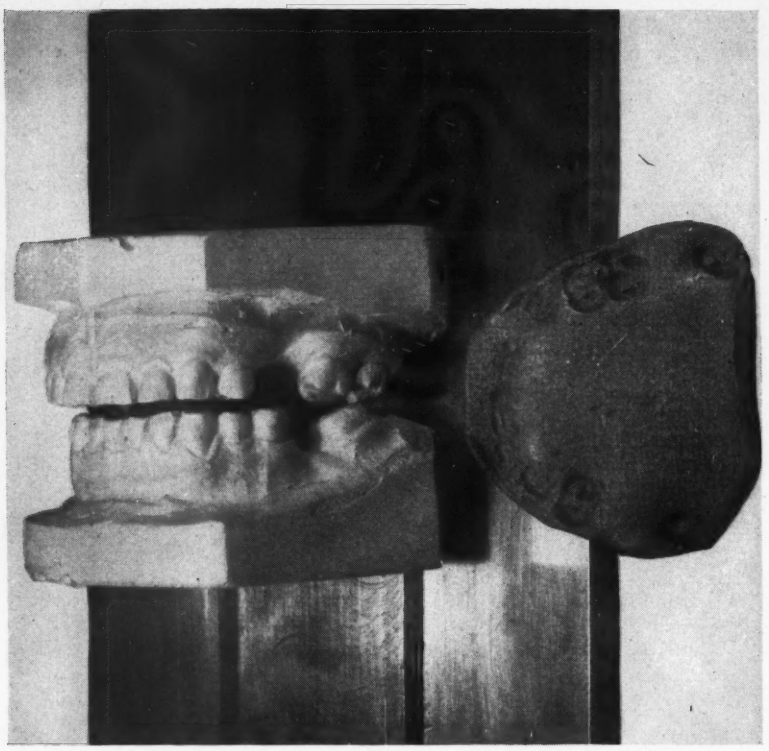

Fig. 2—Casts in true centric relation showing premature contact of upper third molar. Note wear on anterior teeth, undoubtedly due to the abnormal path of closure.

give the patient a sense of touch when the lower teeth tap against the upper; only the hinge closing movement is used. When the point of premature contact is known, and the patient will usually point to it, one can be sure that the interfering incline plane or cusp is the cause of the abnormal path of closure.

After making casts and taking the bite, the casts are mounted in true centric relation. When the wax bite is removed, the acquired centric occlusion may be demonstrated. In this presentation, we are concerned with establishing in natural dentures a centric occlusion that is associated with centric relation. There are three methods of doing this: (1) by restoring a whole new occlusion and articulation;[2] (2) by orthodontia;[3] (3) by reshaping the incline planes through grinding. In cases where orthodontia or restoration of a whole new occlusion is impossible, grinding alone will be of great benefit to the patient.

Fig. 3—Casts on the right show the four upper anterior teeth badly worn. Casts on the left were made after selective grinding and after the four anterior teeth were restored on the lingual with pinledge inlays. (Pinledge inlays made by Doctor Homer Foust, Ann Arbor, Michigan.)

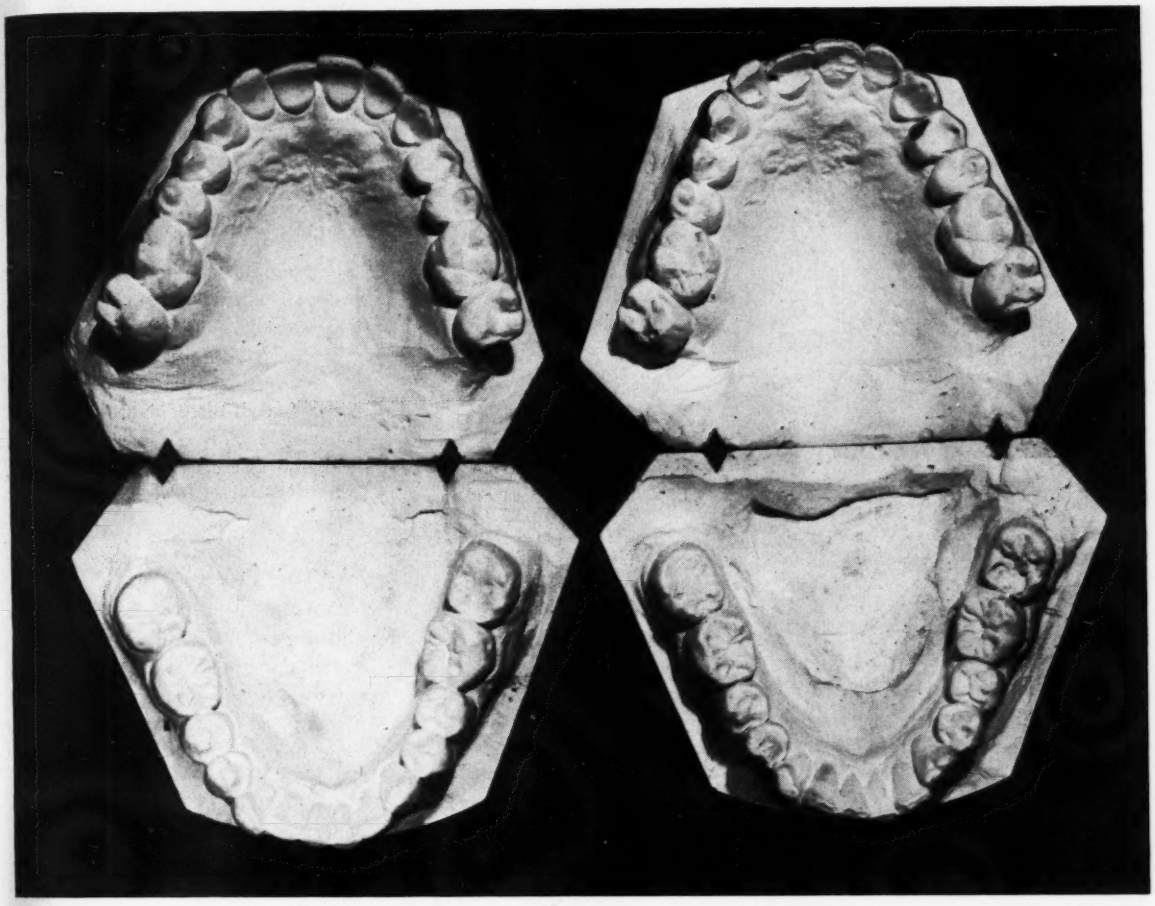

Fig. 4—Casts on the right show worn lingual surfaces of upper anteriors. Casts on the left show lingual view of pinledges. The dark spot on the mesiolingual surface of the upper left first bicuspid represents the area of premature occlusal contact.

Locating Spots to Grind

To locate the correct planes to grind when disharmony exists in the relation of the mandible to the maxilla is of utmost importance. In order to observe the involuntary movements of the mandible and to locate the exact spot to grind on the tooth, have the patient close normally from rest position to occlusion and then have him lightly tap the teeth of the mandible against the teeth of the maxilla. Be sure that only the hinge closing movement is used during the path of closure through the free-way space, without protrusion or lateral slide. The use of some gritty substance as a detector will prevent any protrusive slide. One will then have the proper place at which to use the carbon paper that marks the spot to be ground.

Cautions in Grinding

1. Remember in grinding that *the general anatomy of each tooth should be retained.* When the tooth has been reshaped, its function will be improved; its life will be lengthened, and its health maintained. These results occur because the tooth is relieved of the excess stress which causes inflammation in the gums and periodontal membrane. This inflammation would otherwise result in resorption of the bone surrounding the teeth due to impairment in circulation.

2. *Do not grind the points of the cusps or the spot they touch when in centric occlusion, unless you want to close the bite.* In other words, do not grind the point of the cusps on the upper or lower teeth that occlude in the opposing teeth; instead, widen the incline planes leading to the fossa or sulci. Do not reshape the points of the cusps or the bottom of the fossa or sulci. This avoidance prevents the closing of the bite, which is especially necessary in long overbite cases. The ideal overbite would be equal to the measurement from the summit of the cusp to the depth of the fossa; however, this ideal occlusion and articulation is rare.

3. *Avoid grinding the mesiolingual cusps of the upper molars;* but widen the sulci of the lower molars to bring mesial, distal, and lateral freedom when the teeth are in tight occlusion, as in the act of swallowing. We can regard these mesiolingual cusps of the upper molars as the pestle and the lower molars as the mortar; the points of the cusps of the lower bicuspids as the pestle and the occluding area in centric as the mortar. Be sure that these cusps have slight freedom of movement as the pestle has in the mortar.

4. When freeing the cusps in lateral or protrusive occlusion in articula-

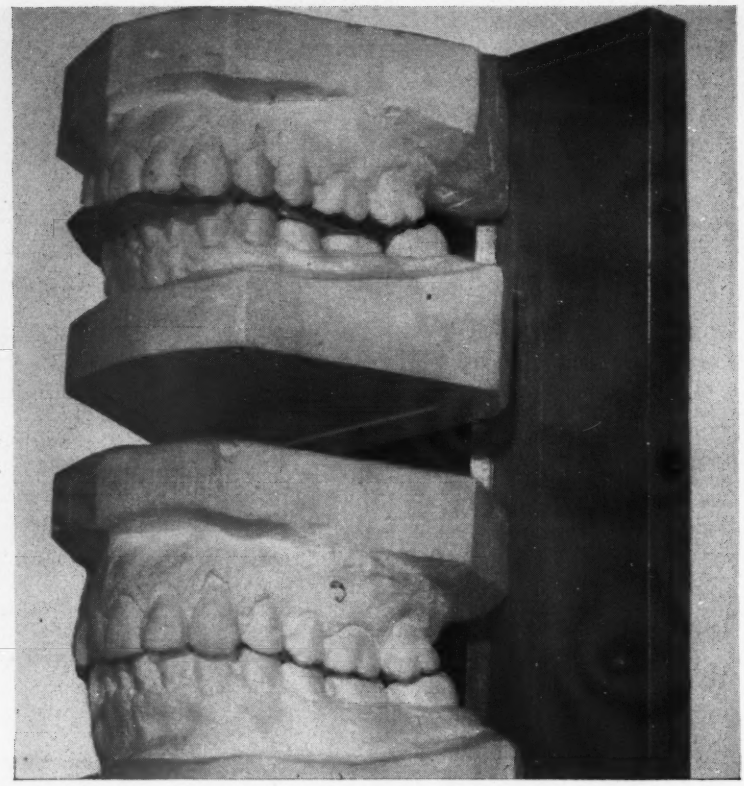

Fig. 5—Upper: Casts mounted on occlusal analyzer with wax bite in true centric relation. Portion of wax removed in bicuspid area. Lower: After grinding, there was space for pinledges on four upper anterior teeth.

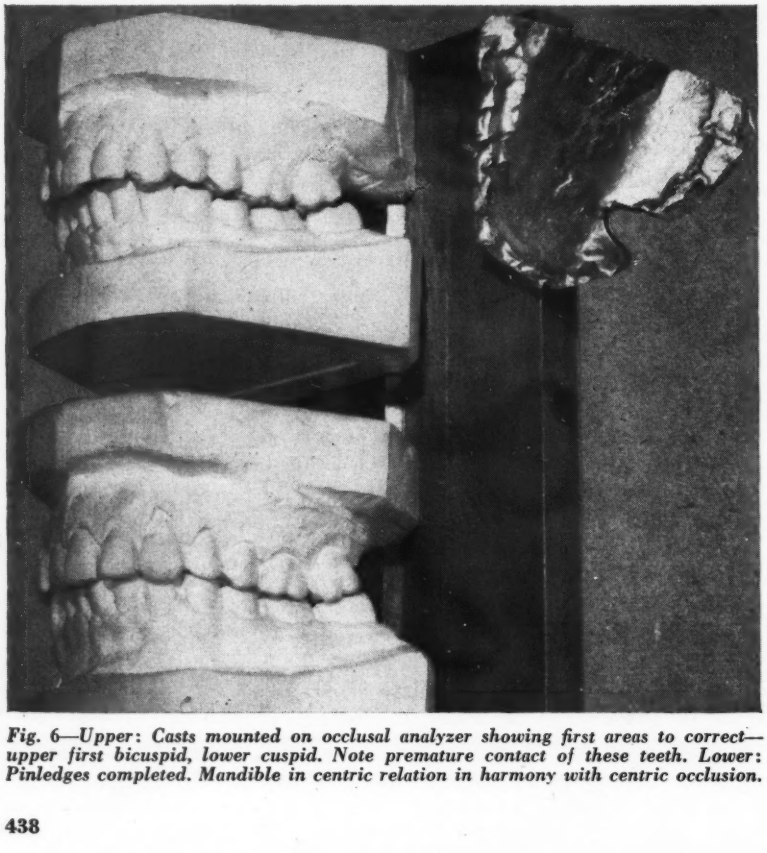

Fig. 6—Upper: Casts mounted on occlusal analyzer showing first areas to correct—upper first bicuspid, lower cuspid. Note premature contact of these teeth. Lower: Pinledges completed. Mandible in centric relation in harmony with centric occlusion.

tion, *do not grind the areas perfected when the teeth were in centric occlusion.* The reason for changing the articulating surfaces of the teeth, by reshaping the incline planes, is to relieve the excess pressure of the root against the periodontal membrane. This reshaping, properly done, gives freedom in centric occlusion; each tooth, and its occluding fossa or sulci, becomes slightly free mesiodistally and laterally.

When grinding the teeth to articulate, many times it is not possible to balance all of the natural teeth; but it is possible to free centric occlusion. Artificial dentures, however, can be balanced and also given freedom in centric occlusion.

Clinical Application

A patient comes in with soreness or pain in a certain tooth or teeth. We examine the tooth and find no cavity. Bitewing films show no sign of interproximal caries. A roentgenogram of the root may show an abnormal condition at the apex; a thickened white line may show along the root on one side and a dark line on the other side; the gums around these teeth may be red on both lingual and buccal or labial sides, and in some stages of inflammation there may be reddish or bluish lines indicating enlarged vessels; at the cervical of the teeth, there may be rings of thickened tissue that have been called traumatic crescents.

On the other hand, we may find gum disease existing and no pain in any particular tooth. The patient may come in for prophylaxis, unaware of any disturbance in the soft tissue. Then is the time to tell him that these incipient conditions exist in his mouth. We restore a small cavity in a tooth when we discover it, not waiting until the tooth aches. So, when the beginning signs of occlusal stress are plainly shown on the gums, why wait until the tooth loosens or there is pain from occlusal trauma before doing anything? Great damage may be occurring without pain and without the knowledge of the patient. He may be shown the color of the roof of his mouth—a healthy pink—and then

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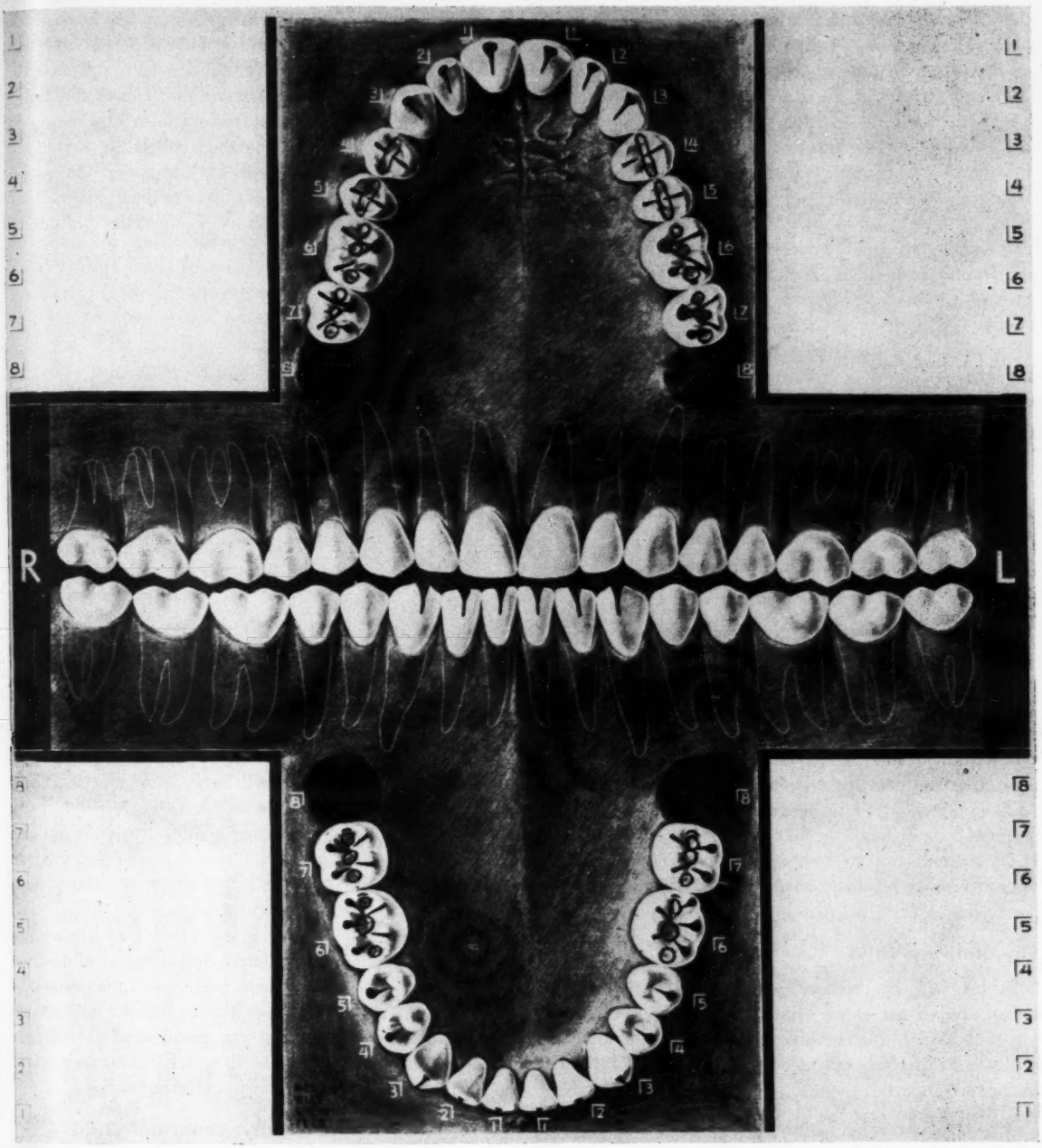

Fig. 7—Procedure for reshaping the occlusal surfaces of the teeth in the correction of occlusal trauma, when the closing movement of the mandible from rest position to occlusion is normal. The black markings on the chart explain where not to grind the occlusal surfaces of the molars and bicuspids, the lingual and incisal surfaces of the upper anteriors, and the labial and incisal surfaces of the lower anteriors.

1. Molars: The black lines and areas inside the circles on the occlusal surfaces of the molars, indicate the areas not to grind. The lines follow the crest of the ridges and extend from the summit of the cusps to the fossae. The circles encircle the fossae and pits.

2. Upper bicuspids: The black lines, which extend from the summit of the cusps to the central groove, and the area inside the oval lines are the surfaces not to grind.

3. Lower bicuspids: The black lines on the buccal cusps of the lower bicuspids follow the lingual ridges from the summit of the buccal cusps to the fossae or pits and should not be ground.

4. Anteriors: Avoid grinding the black markings.

Areas not marked black on any teeth (white areas), can be reshaped. This means that the inclined planes between the cusps and the areas away from the black circles and oval lines, on the molars and bicuspids, can be ground. This will unlock the bite and produce a freedom in centric occlusion that relieves excess pressure on the periodontal membrane.

The above directions for grinding apply to teeth in normal occlusion. *When the teeth are not in normal occlusion, it may be necessary to grind some of the areas marked black. One example of this is when a lower bicuspid occludes end to end with an upper bicuspid; then it is necessary to grind the buccal and lingual areas on the cusps of the upper bicuspids that are marked black, but not the fossae of the upper bicuspids or the points of the cusps of the lower bicuspids.*

Always have in mind not to grind the areas in the long axis of the teeth on molars and bicuspids, unless you wish to close the bite.

the color of the gums around his teeth. The contrast, by arousing concern, will help to gain his cooperation.

When the patient bites on carbon paper in centric occlusion, certain marks are shown on the teeth which indicate that pressure is being exerted from the lower to the upper teeth. Some of these marks on the bicuspids and molars are on the long axis of the teeth; these spots should not be ground. Other marks indicate that excessive stresses, not in line with the long axis of the root, are exerted on the crown. These lateral or mesiodistal stresses may be beyond the physiologic limit of tolerance of the surrounding tissues. The points at which these stresses occur should be ground; otherwise pathologic conditions will occur.

Conclusion

When we look at the movement of the mandible in its function of articulation, we often find an acquired centric occlusion that prevents the normal path of mandibular closure due to occlusal interference. This indicates an unbalanced muscular position of the mandible that is not in harmony with centric relation. Disharmony between centric relation and centric occlusion is a big factor in producing improper wear of the teeth and a locked bite. It results in excessive stress which produces occlusal trauma and causes the failure of many restorations. The reason for changing the articulating surfaces of the teeth by reshaping the incline planes is to relieve the excess pressure of the root against the periodontal membrane.

222 *Center Street*

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[1]C. H. Schuyler: As presented in his clinics on trauma.
[2]Ernest R. Granger: As presented in his clinics on articulation.
[3]Thompson, John R.: The Rest Position of the Mandible and Its Significance to Dental Science, J.A.D.A. 33:167 (February) 1946.

Psychology of the Child as a Dental Patient

ERNEST F. RITSERT, D.D.S., Philadelphia

PSYCHOLOGY is the study of the mind and its attendant phenomena. It deals with human behavior and emotional development as a part of mental growth, both of which are dependent on heredity and environment. It should be the dentist's responsibility to have a sufficient knowledge of the subject to satisfactorily handle his child patient and to carry out an operation once begun to a successful conclusion.

Shy, Retiring Child

1. Sits on his mother's lap or hangs around her chair while awaiting admittance for treatment, and portrays a perfect example of inferiority complex.

2. Usually an only child who has been babied to such an extent that any slight discomfort calls for immediate sympathetic attention from mama.

3. Begins to whimper as soon as he enters the office and cries during the entire operation. A little understanding will go a long way to achieve desired results.

4. Talk to the child in a quiet, confident voice, explaining to him the importance of the treatment.

5. Suggest to the mother that the child be given an opportunity for mass play.

6. Operations begun should always be completed with an occasional few minutes' rest.

Fearful, Timid Child

1. Fear and an unusual display of timidity in a child, serious behavior disorders, may be due to an underlying emotional disturbance caused by a feeling of insecurity. To handle such a child requires a great deal of patience.

2. Do not push treatment nor prolong the visits.

3. Gradually instill through your own personality the strength and courage that you feel the child needs.

4. Make a friend of this child and you will have a friend for life because he will feel secure in your confidence.

5. During treatment keep up a steady monologue of encouragement and considerable compliment when the operation is proceeding satisfactorily.

6. The "hand grabbing" habit usually can be stopped during the period of the child's understanding by reminding him that the instruments used could cause damage if the operator's hand were to slip.

Tantrum Spells

1. The tantrum is nothing more nor less than an unpleasant display of temper. It cannot be handled by a dentist who is also in a temper.

2. The first requirement is to remain calm. Do not raise the voice nor scold, for the more confusion created, the happier the problem child will be because that is exactly what he wants.

3. When composure is maintained, a friendly, encouraging talk may be all that is necessary to proceed with the operation.

4. If it is necessary to begin work immediately and it seems almost impossible to reason with the patient, he should be given a definite understanding that you mean to give treatment and that it will be given regardless of his feeling in the matter.

Mentally Abnormal Child

1. All mentally abnormal children have one trait in common: they are tardy in complying with suggestions made by the operator. Do not, therefore, force the child with garbled talk, but enunciate plainly and distinctly with emphasis and wait for your command to take effect.

2. These children are poor patients at best but must be given every consideration.

3. Caution should be followed when placing the fingers in the mouths of

(Continued on page 445)

(*Continued from page* 440)

these patients for the desire to bite and chew is quite predominant.

Conversation

1. Children are quick to understand changes in the tone level of a voice. When engaged in an operative procedure, a quiet, steady flow of simple words tends to take a child's mind away from the situation. Always keep the conversation at an age level with the child. At times it may be necessary to change the tone of voice to command respect and attention.

2. When it becomes necessary to do a painful part of the operation, explain what you are about to do and why it might be a little unpleasant. If you would win a child's respect, always tell the truth.

3. Recognize children as persons and respect their emotions and intelligence. Do not talk simply to make conversation, nor scold and belittle or tease. Encourage the child to take an interest in what you are doing by assisting in some simple operation. The use of bribes to achieve success is generally a poor practice but it sometimes gets results.

4. One should never keep a child waiting more than fifteen minutes. A

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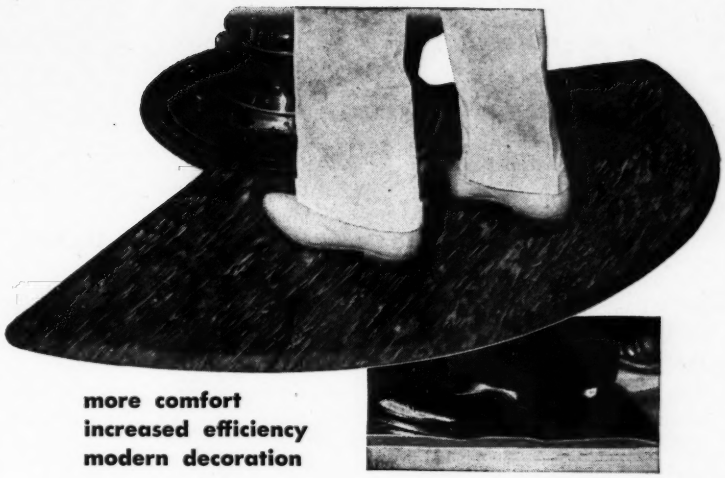

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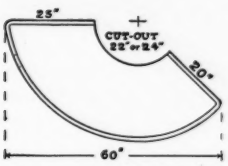

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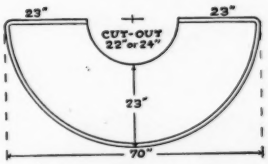

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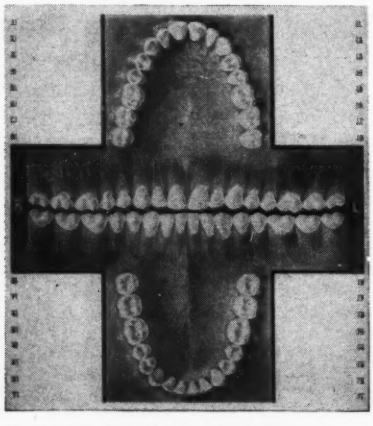

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corner nook that the children know is completely their own, furnished for their age and with a quiet, refined atmosphere that suggests the importance of the visit, will appeal to their taste.

5. The child who is greeted by name by a cheerful smiling assistant and made to feel welcome has been influenced in the right direction. Children are quick to sense that they are not wanted.

6. Appointments for children should be made during the morning hours when they are well rested and will respond more rapidly to treatment. The child who is tired and overwrought is usually a poor patient. Appointments of young children should be limited to the amount of time the patient can tolerate treatment. No set rule can be made but certainly a maximum of thirty minutes is sufficient.

7. As a general rule the presence of the parents serves no useful purpose. Certainly they have confidence in your ability or they would not have brought the child in the first place. The side remarks and general directions usually tend to disrupt rather than aid in the proceedings.

8. The successful campaign is one that is well planned even though it takes but a moment to plan it. The dentist who begins to operate with determination and assurance, rather than the one who is filled with indecision, is the one who will receive the respect of children. They are quick to sense the lack of assurance and will readily take control of the situation.

9. It might be well when we consider the personalities of our young patients to spend a brief moment examining our own. Possibly we should analyze ourselves to see why we are not getting along with them the way we should.

10. There are many ways to foster a better understanding of the problems of children. One of the finest is to associate oneself with some charitable or organizational work dealing with them.

—From *Journal of Dentistry for Children* 12:85-89 (Fourth Quarter) 1945.

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ld have the landmarks
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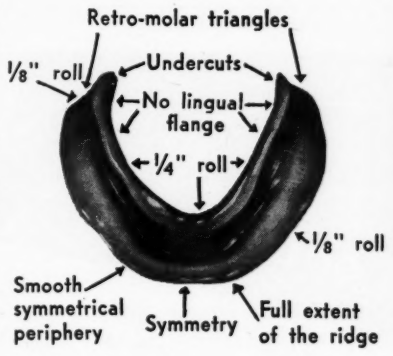

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Contra-Angles

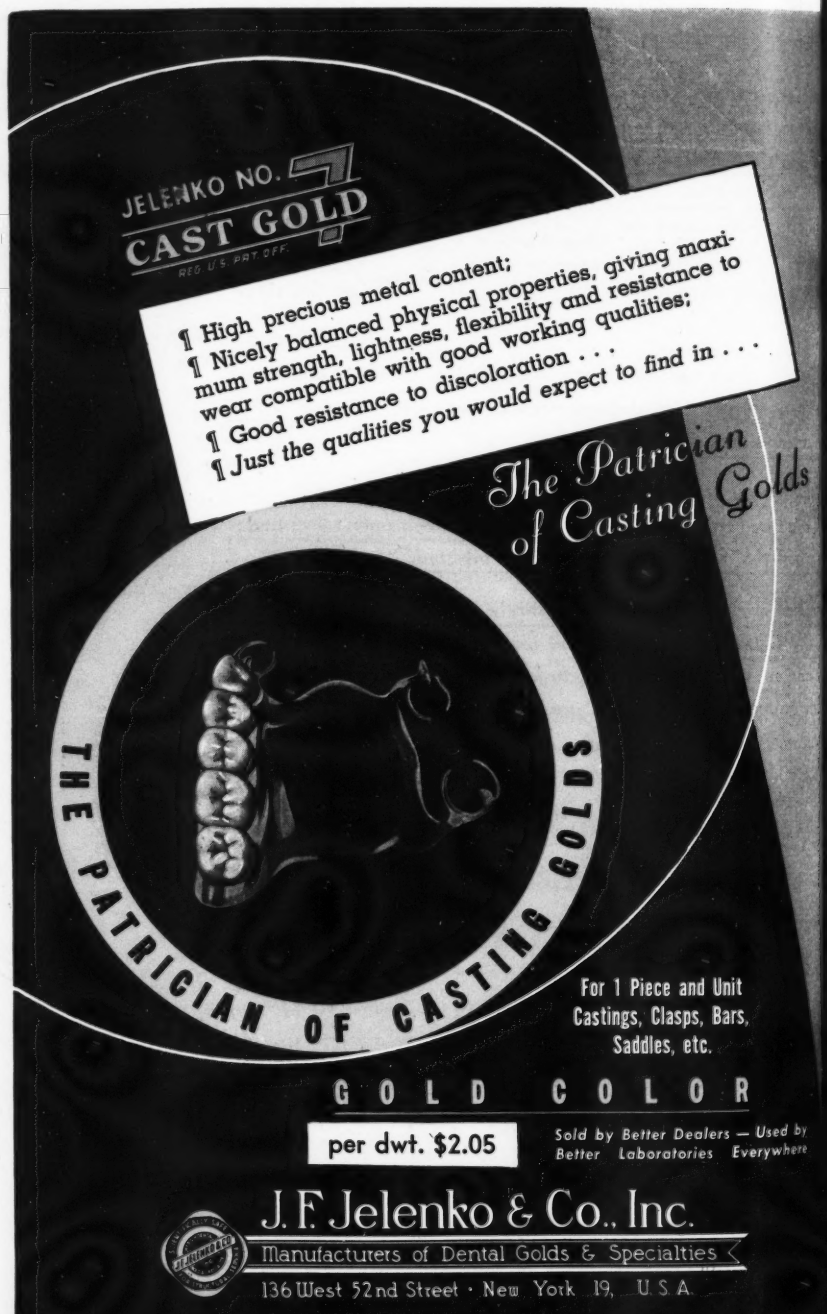
Washington Sniping . . .

Some of the Washington correspondents have had a field day putting the American Medical Association, and particularly the Chicago Medical Society, in a bad light before congressional committees. While hearings were being held on the Wagner-Murray-Dingell bill, representatives of a pre-payment health center in Chicago appeared to testify that members of their organization were being denied membership in the American Medical Association. The denial of membership cost physicians the following privileges, according to the columnists: "They are not permitted to operate or see patients in many hospitals. They can't be admitted to the staff of a medical school, there to teach or conduct research. They can't take care of their share of the charity patients in hospital wards. They can't be certified as specialists by examining boards. No casualty company will grant them mal-practice insurance. They are not permitted to serve as medical officers in the U. S. Navy. And no other state will grant them reciprocal licenses to practice medicine within its boundaries."[1]

These newspaper stories are intended to give the public the idea that organized medicine is a monopoly which plots to destroy the public. The smear journalists forget that if it were not for professional organizations such as medical and dental societies, the public would have no protection from quacks and incompetents. For example, hospital standards are enacted to safeguard the public. These standards are created by such voluntary agencies as the American Medical Association, the American College of Surgeons, and the American Hospital Association. The public is protected against fraudulent drugs and nostrums by agencies such as the Council on Dental Therapeutics of the American Dental Association and the Council on Pharmacy and Chemistry of the American Medical Association.

All these agencies are voluntary. The government has nothing whatever to do with any of them. Membership in any professional society is dependent on an agreement to abide by a code of ethics. Ethics are the protocols for fair treatment of the public. The professional organizations have been applying discipline to members for years and have never needed a Federal Trade Commission, a Food and Drug Administration, or a Security and Exchange Commission to do police work. Standards for professional education and competency and public health requirements have been erected voluntarily by professional societies to pro-

[1]Edson, Peter: Senate Is Urged to Investigate Chicago Medical Society's 'Closed Shop,' Chicago Daily News, (June 27) 1946.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tect the public. Let the snipers keep these facts in mind.

Vacations, Compulsory . . .

Who wouldn't like to be an executive of the company that makes Johnson's Wax? This Company compels its executives to take vacations and "additional time off for recreational purposes as is necessary or desirable to maintain a high peak of physical and mental well-being."[2] The Johnson people do not want their executives shuffling papers on their desks and twisting paper clips when the welfare of the Company can be better served by a trip to a golf course or a nap under a tree. The Johnson executives are warned in the Policy Manual of the Company to organize their work and surround themselves with capable assistants so that the "pressure of business will not interfere with adequate compliance with the terms of the policy." This might sound like a warning to cut out business if it interferes with pleasure, but the "play" clause is more than that; it was conceived in deep wisdom.

[2]Policy Manual, S. C. Johnson & Son, Inc., Racine, Wisconsin.

Executives are paid for ideas and for methods of activating ideas. If an executive becomes submerged in details and in odds and ends of routine, he should lose his executive rank and return to the category of a clerk. The Johnson Company wants executives to have a fresh and clear outlook and a bubbling up of new ideas and plans. Although they do work in a super-modern building designed by Frank Lloyd Wright, they still can become mighty stale if they sit at a desk too long or look at the same people too much.

When a dentist stays too long in his little kingdom of four walls, concentrating on small things, it is easy for his body to become mighty tired and his mind to become dull. Then he will notice more errors in diagnosis and treatment and a tenseness and jitteriness in his relationship with patients. Then is the time for him to put down his instruments and get the hell out of his office. The Johnson Company will kick an executive outside if he hasn't enough sense to go himself. The dentist, being such a rugged (and often ragged) individualist, will have to discipline himself to get out of his office and stay out at regular intervals if he wants to keep at the peak of physical and mental well-being.

Dental Health Columns . . .

Health columns in metropolitan papers have been published for years. Some are excellent; some are putrescent. My vote for the leader among the putrid class goes without hesitancy to the syndicated column of old Doc Brady. Some medical writers know something about dentistry; most do not. Dental health information has been tucked in between the advice on bunions and information on the newer antibiotics. In all cases, dental information was disseminated by medical writers. Until recently, no newspaper had a sustaining and exclusive dental health column. *The*

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Wears well and holds its form under all normal service, yet is easily burnished.

For Carmichaels and All Inlay Abutments

TYPE C HARD

JELENKO Durocast REG. U.S. PAT OFF

GOLD COLOR per dwt. $2.15

Very hard and strong, assuring long, enduring service under heavy occlusal loads.

TYPE C HARD

JELENKO FIRMILAY REG. U.S. PAT. OFF.

GOLD COLOR per dwt. $2.05

Combines Type C hardness and strength with Type B burnishability and working qualities.

Each of these Jelenko Inlay Golds is Certified to meet — and in fact exceeds — A.D.A. Specification No. 5 for its type as to precious metal content, hardness, strength, ductility and resistance to discoloration.

Sold by Better Dealers — Used by Better Laboratories, Everywhere.

J. F. Jelenko & Co., Inc.

Manufacturers of Dental Golds & Specialties

136 West 52nd Street · New York 19, U. S. A.

Send Your Scrap to Jelenko — Accurate Assay, Prompt Report

***Prompt Control of* ANESTHESIA**

***Prompt Control of* PATIENT....**

Whether in a simple dental operation or in an involved surgical procedure, prompt, easy control of the patient is of the utmost importance to the operator. Quick, positive control is an important advantage of the McKesson Nargraf. The Nargraf technic is simple—one valve determines the flow of both nitrous oxide and oxygen. A change in dosage reaches the patient immediately. The flow of gas is automatically adjusted to the changes in the patient's breathing rate. The Nargraf makes nitrous oxide anesthesia simpler, easier, surer.

Know the Nargraf and the Nargraf will be your choice of a gas machine.

NARGRAF THE McKESSON APPLIANCE CO. N_2O McKESSON O_2 TOLEDO, O. U.S.A. EUTHESOR

EASOR

Chicago Sun is the first metropolitan newspaper to have the distinction of an exclusive dental column. In this newspaper, the dental column is published regularly three times a week as a substitute for and in the same position as the medical column. The dental column is written by a well-qualified dentist, Doctor Floris van Minden.

It would be desirable if other newspapers throughout the country would contract for this column from The Chicago Sun Syndicate. Dentists who have friends and patients among newspaper publishers are in a good position to make this suggestion. The more the American people know about the facts of dental health, the better for all. Doctor van Minden's column should be circulated to millions of newspaper readers.

The Years of Life . . .

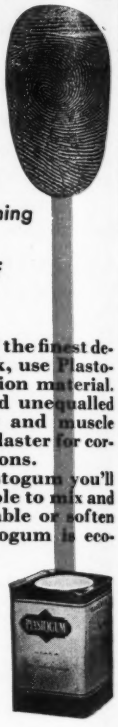
If you are the average person, whoever he may be, you may expect to live sixty-five and one-eighth years, which is sixteen years longer than people lived at the beginning of the century. If you are a woman, you will live to be almost sixty-nine; if a man, to the age of sixty-three and one-half years.

Does this have any dental implications? Most assuredly. It means that more people live longer to have more things happen to their dental apparatus. We can expect, for one thing, more demands for prosthetic service unless we develop more effective programs of prevention. Longevity is of sociologic and economic importance; it also has an important connotation in dental practice. For example, more and more emphasis is being given to the specialty of geriatrics in medicine. We can expect, as people live longer, that there will be more emphasis on geriodontics.

Suckers, Attention . . .

When people have money, they will buy anything. A lot of them are taking on large amounts of watered stock in companies that have little or no chance for success in the hard years. Financial Editor, Robert P. Vanderpoel, of the *Chicago Herald-*

PLASTOGUM



Assures finest detail

Easy to mix

Is pleasantly flavored

Accurate muscle trimming

Accurate recording of periphery

For exact registration of the finest detail in full denture work, use Plastogum—the ideal impression material. It is highly accurate and unequalled for recording periphery and muscle trimming. Superior to plaster for corrective or wash impressions.

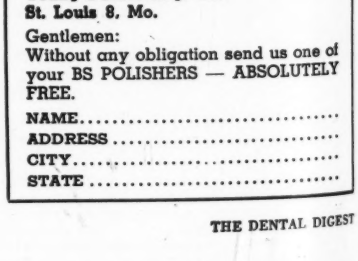
Once you've used Plastogum you'll always prefer it. So simple to mix and handle, it will not crumble or soften from absorption. Plastogum is economical to use and patients like its pleasant flavor and the fast, easy way you can take impressions without discomfort. Try Plastogum. Write today for your *free sample*.

FREE Sample

HARRY J. BOSWORTH COMPANY
1315 S. MICHIGAN AVENUE · CHICAGO

Others Have Tried BS POLISHERS Why Not You?

Many dentists have sent in the coupon below and found out why BS Polishers are preferred over many others. They can readily understand why this soft, flexible rubber polisher makes a patient feel safe and comfortable, also why it is easy for it to clean and polish every tooth to a lustre brightness. Why don t you find out these facts for yourself? Send the coupon in now!



Young Dental Mfg. Co.
St. Louis 8, Mo.

Gentlemen:
Without any obligation send us one of your BS POLISHERS — ABSOLUTELY FREE.

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ADDRESS.....
CITY.....
STATE.....

American,[3] has the courage and the foresight to sound this warning:

The suckers are being taken again on a vast scale. Today it appears to be nobody's business but when the blowup comes, as always, there will be the very dickens to pay.

Let us be more specific as to what we mean. Securities are being offered to the public in great volume at fantastic prices.

Scramble to Unload

Today, thanks to the federal security acts, the evidence is at hand for all those who care to do a little research. This evidence reveals that a great scramble has been and is taking place on the part of promoters and a limited number of small business men to get theirs while the getting is good, leaving the public to hold the bag.

The common procedure in these cases is for the small, privately-owned corporation which has possibly made a killing out of war contracts or otherwise temporarily profited from the unusual war conditions to increase its capital, frequently several hundredfold. The owner or small group in control generally holds on to enough stock to keep themselves in the saddle and sells the remainder to underwriters, who in turn peddle it to the public after a substantial mark-up of their own.

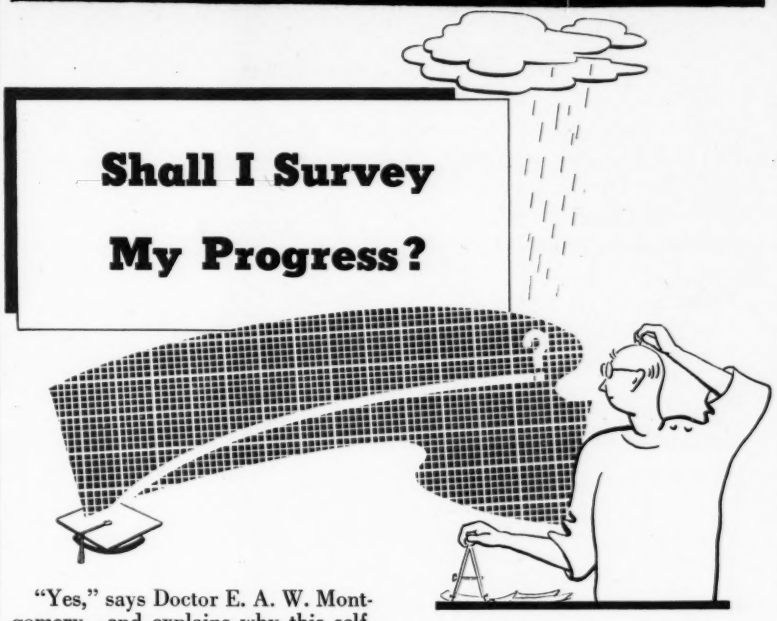
The insiders make their killing, pay their meager 25 per cent capital gains tax on the money paid over to them on their 49 per cent or so interest, and then settle down to a few years of operating companies, usually at fattened salaries, hoping that they may be the one in a hundred or more who are able to make the grade when the going gets really rough.

Dentists have a little more money in hand now than they did a few years ago. Some of them may be tempted to fall for the fancy literature of promise of the promoters. The temptation is strong to buy into a business that "assures" a 10 per cent return in money. The dentist who is working at his profession is better off to confine his investments to high-grade securities of substantial history and a sound record of earnings. Three per cent in the hand is better than 10 per cent in the "promise."—E.J.R.

[3]Vanderpoel, Robert P.: Suckers Take Bait, Hook, Line, Sinker, Chicago Herald-American (June 19) 1946.

ARE YOU BUYING SAVINGS BONDS?

In your ORAL HYGIENE this month



"Yes," says Doctor E. A. W. Montgomery—and explains why this self-survey is more necessary now than ever before. Check yourself on the five points summarized on page 1365 in the August issue of Oral Hygiene—they're the five points vital to a dentist's success.

★ ★ ★

"Is There Profit in Your Voice?"—Doctor Albert G. Pietsch says, "Your voice is your personal insurance. The more appeal and enthusiasm in your speech, the greater the dividends." Putting your voice in the category of important assets may sound a bit far-fetched—until you read the sane and sensible article on page 1354.

★ ★ ★

"What Should the Dentist Do About the Dental Laboratory?"—The author, Samuel G. Supplee, explains that "The purpose of this article is not to present anything new but to remind the ethical profession and the ethical laboratories of what has taken place, and to suggest what *may* take place if the two do not adjust their common problems in a *legal* manner." You will find this interesting article on page 1358.

★ ★ ★

"Child Psychology That Pays"—Doctor Stewart A. MacGregor says: "If more dentists would curb their tongues and their tempers and instead use their eyes to control children, their success would be greater." This isn't hypnotism in any sense—it is a method learned from a deaf-and-dumb parent, and it works.

Progressive dental education courses will be given to veteran dental officers by an outstanding faculty under the direction of the University of Illinois College of Dentistry. The long-range postgraduate program instituted by the University of Illinois is of particular interest because, after the needs of the veterans are satisfied, the courses will be continued as regular post-graduate work. Many dentists will return again and again to take the course.

★ ★ ★

"Hazards of Compulsory Health Insurance"—You may be startled by some of the facts and figures presented in Elizabeth W. Wilson's article on page 1376. A great deal of valuable information is packed into this very short article.

★ ★ ★

"Death in the Dental Chair"—Is more stringent legislation necessary for the dentist in his use of nitrous oxide-oxygen anesthesia? Doctor Louis Willinger does not think it is a matter for legislation but does feel that "it behooves the dental profession to make certain that all dental practitioners who administer anesthetics of whatever nature have the necessary qualifications." You will find his article on page 1366.

★ ★ ★

Don't overlook the regular departments—they contain a lot of interesting and helpful information condensed for rapid reading.

CLINICAL AND LABORATORY SUGGESTIONS

Form to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor
THE DENTAL DIGEST
708 Church Street
Evanston, Illinois

From: _____

_____

Subject: _____

Explanation of Procedure:

Sketch:

$10 will be paid to author on publication of accepted suggestions.

DENTAL MEETING Dates

Wisconsin Dental Economic Study Club, August 23-24, Hotel Loraine, Madison.

•

University of Buffalo School of Dentistry, forty-fourth annual meeting, Hotel Statler, Buffalo, October 8-10.

•

Montreal Dental Club, twenty-second annual meeting, October 23-25, Mount Royal York Hotel, Montreal.

•

American Society for the Advancement of General Anesthesia in Dentistry, Hotel New Yorker, October 28. For information write to Doctor M. Hillel Feldman, 730 Fifth Ave., New York City.

•

Florida State Board of Dental Examiners, regular meeting, Seminole Hotel, Jacksonville, October 28-31. For information write to Doctor A. W. Kellner, P. O. Box 155, Hollywood.

•

The St. Louis University Dental Alumni Association, postwar reunion, School of Dentistry Building, St. Louis, November 22-23. For information write to Doctor O. J. Dick, 1657 S. Grand St., St. Louis 4.

•

Journees Dentaires De Paris, regular meeting, Ecole Odontotechnique of Paris, France, November 21-24.

•

Pennsylvania State Dental Society, annual meeting, Hotel Bellevue-Stratford, Philadelphia, May 6-8, 1947.